Main Group D

Technical Data

D

1 – Sub Group	Technical Data
2 – Sub Group	Adjustment Data and Tolerances
3 – Sub Group	Amounts of torque to be applied for screw connections of the LLOYD 600

Vehicle Types	Body Types	Technical Markings
LLOYD Pick up	Low Loader, open	9
LLOYD LP 600 *)	Private Car, 4 Seater, 2 Doors	13
LLOYD LS 600 *)	Station Car, 4 Seater, 3 Doors	14
LLOYD LT 600	Large Passenger, 6 Seater, 3 Doors	17
LLOYD LTK 600	Delivery Van, 3 Doors	18

*) both models in "Alexander" and "Standard" type.

Power Plant

Engine	LP/LS 600 LT/LTK 600
Manufacturer and model	LLOYD 600
Maximum torque	3.9 mkg at 2500 r.p.m.(28.2 ft. lbs.)
Continuous power output	19 HP at 4500 r.p.m. (24 bhp. SAE)
Short-duration power output	19 HP at 4500 r.p.m. (24 bhp. SAE)
Specific power output	31.7 HP/Liter
Mean working pressure	6.37 kg/cm² at 4500 r.p.m. (90.5 p.s.i.)
Mean piston speed	9.6 m/sec. at 4500 r.p.m. (31.5 ft./sec.)
Compression ratio	6.6
Crank ratio	4.0
Location in the vehicle	in the front transversely to the direction of drive
Suspension	3 point, rubber-cushioned
Lubrication system	pressure feed
Cooling system	air (fan n = 1.65 x n crankshaft)
Weight, approx.	52 kg (115 lbs.)
Minimum fuel consumption	235 g = 8.3 oz. / HP/h at 2500 r.p.m.
Number of cylinders	2
Arrangement of cylinders	40° inclined forward/side by side
Cylinder casting	individual
Cylinder material	cast iron
Cylinder bore	77 mm (3.03 in.)
Stroke of piston	64 mm (2.52 in.)
Total piston displacement	596 cc (36.36 cu. in.)
Cylinder head	light alloy/detachable/individual heads
Cylinder liners	none
Valve-seat inserts	shrunk fit
Makers of pistons	MAHLE/KARL SCHMIDT
Piston material	light alloy/with inserted steel struts/cast
Piston rings	2 compression, 1 oil scraper
Connecting rod	H-section
Connecting rod bearings	roller bearings with cage
Crankshaft	steel/pressed
Crankcase	light alloy/split type
Lubricating oil passages	cast-in pipe
Number of valves (each cylinder)	inlet: 1, exhaust: 1
Arrangement of valves	overhead
Valves are actuated by	rocker arms
Camshaft	above cylinder head/2 ball bearings
Camshaft drive	sprockets and single-roller chain

Engine Accessories	LP/LS 600 LT/LTK 600
Fuel pump	diaphragm type
Fuel tank capacity	5.5 imp. gals. – LT/LTK 600 6.8 imp. gals.
Fuel filter	inside fuel cock
Oil pump	gear type
Oil capacity	1.8 Liter appr. (0.4 imp. gals.)
Oil filter	strainer at pump inlet
Air cleaner	dry filter insert
Carburettor	Solex 28 VFIS
Carburettor Type	downdraught
Carburettor adjustment, main jet	120
idler jet	50
idler jet air	1.0
venturi	24
air regulating jet	220
Electrical system	6 volts
Ignition	battery ignition
Contact breaker	single/points gap 0.4 mm or 0.0157"
Distributor	Bosch VJ 2 BL mK
After Engine No. 359 872	Bosch VJ 2 BL 3 mK
After Engine No. 378 560	Bosch VJ 2 BL 5 mK
Spark-advance mechanism	centrifugal regulator
Ignition timing	3° before TDC
Sparking plugs	Bosch W 225 T 1 or Beru 225/14 u 2
Spark gap	0.7 to 0.8 mm or 0.0276" to 0.0315"
Firing order	1-2
Starter	Bosch CDD 0.4/6 R 5
Starter design	screw-push starter
Starter control	electromagnetic
Dynamo	LJ/GEH 130/6/2600 L 8
After Engine No. 393 210	LJ/GEH 160/6/2500 L 8
Dynamo drive	V-belt 9.5 x 700 (0.3740" x 27.559")
Type of regulator	voltage regulation
Charging begins	at 1000 r.p.m. of the crankshaft
Gear ratio: crankshaft/dynamo shaft	i = 0.605
Battery	6 volts, 50 amps./hr.

Power Transmission	
Clutch	Fichtel & Sachs K 4.5
After chassis No. 6/288 739 resp. 6/116 093	Fichtel & Sachs K 5 E
Clutch type	single dry plate
Charge-speed gears	mechanical gears
Gearbox mounting	bolted to engine
Number of speeds	3 or 4 forward, 1 reverse
Gear ratio 3-speed gearbox	4.58/2.19/1.31; reverse 4.58
4-speed gearbox	4.58/2.39/1.54/1.03; reverse 4.58
Gear shift lever	on steering column
Gear changing type 3-speed gearbox	gear lever
4-speed gearbox	steering column shift lever
Gearbox oil capacity 3-speed gearbox	0.9 Liter (0.2 imp. gals.)
4-speed gearbox	1.0 Liter (0.22 imp. gals.)
Power transmission	direct front wheel drive
Driven wheels	2 (front wheels)
Differential	bevel gears/in the gear box
Drive of half-axles	helical spur gears
Gear ratio Revs. of transmission/Revs. of wheel	
up to ch. No. 6/225 052	i = 4.5 LT/LTK 600 i = 4.87 } Three-speed
from ch. No. 6/255 053	i = 4.18 } gearbox
	i = 4.87 LT/LTK 600 i = 5.29 Four-speed gearbox
Transmission of thrust	transverse springs

Running Gear

Wheels, tyres, steering	**LP/LS 600**	**LT/LTK 600**
Type of wheels	Slotted disc wheel	
Number of wheels	4 (and 1 spare wheel)	
	LP/LS 600	**LT/LTK 600**
Tyre sizes Front and rear	4.25 – 15 Tubeless after chassis No. 6/263 022)	5.00 – 15 Tubeless after chassis-No. 6/114 420 after chassis-No. 6/116 464 5.60–13 (Tubeless)
Tyre pressure in lbs./sq. in. depending on load:	front 21.3 – 24.9 lb./sq. in. rear 17.1 – 28.4 lb./sq. in.	front 21.3 rear 25.6 – 35.6 (5.00 – 15) front 17.1–20.0 rear 17.1–25.6 (5.60–13)
Type of rim	drop-centre rim	drop-centre rim
Size of rim	2,5 C x 15	3½ J x 15 4 J x 13 after chassis-No. 6/116 464
Wheel support, front	independent suspension by transverse springs	independent suspension by transverse springs
Wheel support, rear	floating axle	floating axle
Suspension, front	2 transverse springs	2 transverse springs
Suspension, rear	2 longitudinal springs	2 longitudinal springs
Shock absorber	4 telescopic shock absorbers	4 telescopic shock absorbers
Camber	2°	2°
King-pin inclination	7°	7°
Toe-in (unloaded)	0 – 4 mm (0 – 0.1575")	0 – 4 mm (0 – 0.1575")
Caster angle	0°	0°
Steering gear system	Rack-and-pinion individual-wheel type	Rack-and-pinion individual-wheel type
Steering gear ratio	i = 17.65	i = 17.65
Maximum steering lock	ins. 28° outs. 24.5°	ins. 33.5° outs. 26.5°
Steering column	left-hand	left-hand
Track rod	Divided	Divided
Minimum turning circle diam.	10,5 m (34,45 ft)	10.5 m (34.45 ft.) LT/LTK 600, long wheel base 13 m (42.97 ft.)

Brakes	**LP/LS 600 LT/LTK 600**
Brake system	LLOYD – Teves
Action of pedal brake	On all 4 wheels
Effective total braking surface	456 cm² (70.7 sq. in.)
Transmission of brake power	Hydraulic
Brake drum diam.	200 mm (7.874")
Action of hand brake	Mechanical, acts on front wheels, expanding type

Chassis	
Type of chassis	Centre tube
Lubricating System	Individual lubrication

Measurements and Weights

	LP/LS 600	**LT/LTK 600**	**LT/LTK 600 lg.w.b.**	**Low Loader**
Wheelbase	2000 mm (78,74")	2350 mm (92,52")	2850 mm (112,2")	2850 mm (112,2")
Track (front)	1050 mm (41,34")	1200 mm (47,24")	1200 mm (47,24")	1200 mm (47,24")
Track (rear)	1100 mm (43,31")	1200 mm (47,24")	1200 mm (47,24")	1200 mm (47,24")
Ground clearance	125 mm (4,937")	120 mm (4,724")	120 mm (4,724")	120 mm (4,724")
Length, overall	3355 mm (132,09")	3550 mm (139,763")	4050 mm (159,448")	4050 mm (159,448")
Width, overall	1410 mm (55,51")	1485 mm (58,464")	1485 mm (58,464")	1485 mm (58,464")
Height, overall	1410 mm (55,51")	1630 mm (63,779")	1630 mm (63.779")	1630 mm (63,779")
Minimum turning circle	11 m (36,08 ft)	11 m (36,08 ft)	13,5 m (44,28 ft)	13,5 m (44,28 ft)

Technical data

Weights	Standard LP		Standard LS		Alexander LP		Alexander LS	
	3-Speed	4-Speed	3-Speed	4-Speed	3-Speed	4-Speed	3-Speed	4-Speed
Empty	540 kg (1191 lb)	545 kg (1202 lb)	545 kg (1202 lb)	550 kg (1212 lb)	560 kg (1235 lb)	565 kg (1245 lb)	580 kg (1278 lb)	585 kg (1289 lb)
Totalweight	855 kg (1885 lb)	860 kg (1895 lb)	875 kg (1929 lb)	880 kg (1940 lb)	855 kg (1885 lb)	860 kg (1895 lb)	875 kg (1929 lb)	880 kg (1940 lb)
Axle load (front)	420 kg (926 lb)	420 kg (926 lb)	420 kg (926 lb)	420 kg (926 lb)	450 kg (992 lb)	450 kg (992 lb)	450 kg (992 lb)	450 kg (992 lb)
Axle load (rear)	450 kg (992 lb)	450 kg (992 lb)	450 kg (992 lb)	450 kg (992 lb)	540 kg (292 lb)	450 kg (992 lb)	450 kg (992 lb)	450 kg (992 lb)

	LT		LT (long)		LTK		LTK (long)		Low Loader	
Empty	715 kg	(1576 lb)	735 kg	(1620 lb)	745 kg	(1642 lb)	765 kg	(1687 lb)	720 kg	(1587 lb)
Payload	–	–	–	–	475 kg	(1047 lb)	455 kg	(1002 lb)	440 kg	(970 lb)
Total weight	1170 kg	(2579 lb)	1170 kg	(2579 lb)	1285 kg	(2833 lb)	1285 kg	(2833 lb)	1225 kg	(2701 lb)
Axle load (front)	575 kg	(1268 lb)	575 kg	(1268 lb)	575 kg	(1268 lb)	600 kg	(1323 lb)	600 kg	(1323 lb)
Axle load (rear)	650 kg	(1434 lb)	650 kg	(1433 lb)	750 kg	(1654 lb)	750 kg	(1653 lb)	650 kg	(1433 lb)
Lenght	–	–	–	–	1600 kg	(3527 lb)	2000 kg	(4410 lb)	1960 kg	(4321 lb)
Width	–	–	–	–	1285 kg	(2832 lb)	1285 kg	(2833 lb)	1380 kg	(3042 lb)
Height	–	–	–	–	1250 kg	(2755 lb)	1250 kg	(2756 lb)	490 kg	(1080 lb)

Other Data	**LP/LS 600**	**LT/LTK 600**
		3-Speed Gearbox
	Gear ratio i = 4.5	Gear ratio i = 4.18 / Gear ratio i = 4.87
Top Speed	95 km/h (59.01 mph)	100 km/h (62.1 mph) / 80 km/h (49.7 mph)
Highway Speed	90 km/h (55.9 mph)	95 km/h (59.01 mph) / 75 km/h (46.6 mph)
		4-Speed Gearbox
	Gear ratio i = 4.87	Gear ratio i = 5.29
Top Speed	100 km/h (62.1 mph)	85 km/h (52.79 mph)
Highway Speed	100 km/h (62.1 mph)	85 km/h (52.79 mph)
Normal fuel consumption (DIN 70030 August 1956)	51 m.p.g.*	45 m.p.g.**

*) Constant testing speed 75 km/h (46.6 mph).

**) Constant testing speed 64 km/h (39.68 mph).

Speed at 2500 rpm	LP/LS 600				LT/LTK 600	
	3-Speed Gearbox		4-Speed Gearbox		3-Speed Gearbox	4-Speed Gearbox
	Gear ratio i = 4.5	Gear ratio i = 4.18	Gear ratio i = 4.87		Gear ratio i = 4.87	Gear ratio i = 5.29
1st Gear. approx.	14 km/h (8.69 mph)	14,5 km/h (9.00 mph)	12,5 km/h (7.76 mph)		13 km/h (8.07 mph)	11 km/h (6.83 mph)
2nd Gear. approx.	28 km/h (17.39 mph)	30 km/h (18.63 mph)	24 km/h (14.90 mph)		26 km/h (16.15 mph)	21 km/h (13.04 mph)
3rd Gear. approx.	47 km/h (29.19 mph)	50 km/h (31.05 mph)	37 km/h (22.99 mph)		45 km/h (27.95 mph)	33 km/h (20.49 mph)
4th Gear approx.	–	–	55 km/h (34.16 mph)		–	49 km/h (30.43 mph)
Speed at 4500 rpm						
1st Gear. approx.	24 km/h (14.90 mph)	26 km/h (16.15 mph)	22,5 km/h (14.06 mph)		22 km/h (13.66 mph)	20 km/h (12.42 mph)
2nd Gear. approx.	51 km/h (31.67 mph)	54 km/h (33.53 mph)	43 km/h (26.70 mph)		47 km/h (29.19 mph)	38 km/h (23.61 mph)
3rd Gear. approx.	84 km/h (52.16 mph)	91 km/h (56.51 mph)	66,5 km/h (41.30 mph)		80 km/h (49.68 mph)	59 km/h (36.64 mph)
4th Gear approx.	–	–	98,5 km/h (61.18 mph)		–	88 km/h (54.65 mph)

Specific engine revolutions (1000 m/3rd gear resp. 4 th gear)	3196		2970		2730		3354		3072	
Climbing ability in %	Full Load	1 Person	Full Load	1 Person	Full Load	1 Person	Full Load	1 Person	Full Load	1 Person
1st Gear.	33	> 34	32	35	34	40	22	> 34	28	> 34
2nd Gear.	13.5	20.5	13	19	16	25	9	15	13	21.5
3rd Gear.	7	10	6	9	9	14	4	7.5	7.5	12.5
4th Gear.	–	–	–	–	5	8	–	–	3.7	7

Engine

Designation	New	Remarks
Camshaft housing		
1. Diameter of bore for ball bearings (Chain case side)	46.987 – 47.003 mm (1.8499 – 1.8505")	
2. Diameter of bore for ball bearings (distributor drive side)	46.987 – 47.003 mm (1.8499 – 1.8505")	
Camshaft		
1. Number, type and designation of bearings	2 ball bearings 6204 DIN 625	
2. Diameter of journal for bearing on:		
Chain case side	20.002 – 20.011 mm	
Distributor drive side	20.002 – 20.011 mm (0.7875 – 0.7878")	
3. Eccentricity of camshaft put in place (measured at bearing surface for radial sealing ring at connection piece for distributor)	max. 0.05 mm (0.002")	
4. Axial clearance of camshaft	ball bearings!	
5. Radial clearance of camshaft	ball bearings!	
6. Maximum axial movability of ball bearings inside housings	0.35 mm (0.0138")	
7. Camshaft adjustment	Inlet valve of cyl. 1 opens at 1 mm (0.0394") clearance 0° before TDC ± 4°	For timing data see sub-group "Timing"
8. Camshaft adjustment (from Engine No. 336 589)	Inlet valve of cyl. 1 opens at 1 mm (0.0394") clearance 6° after TDC ± 4°	
Rocker arm and rocker arm supports		
1. Diameter of bore for rocker arm bushing	18.000 – 18.018 mm (0.7087 – 0.7094")	
2. Outer diameter of rocker arm bushing	18.028 – 18.039 mm (0.7098 – 0.7102")	Admissible wear: 15.05 mm (0.5925")
3. Inside diameter of rocker arm bushing (with inserted bushing)	15.023 – 15.034 mm 0.5915 – 0.5919")	Admissible wear: 14.980 mm (0.5898") (in way of rocker arm support)
4. Length of rocker arm bushing	27.5 mm (1.0827")	
5. Diameter of rocker arm bolt	14.992 – 15.000 mm (0.5902 – 0.5905")	
6. Clearance between bolt and bushing	0.023 – 0.042 mm (0.0009 – 0.0017")	Admissible wear: 0.070 mm (0.0028")
Cylinder head and valves		
Inlet valve		
1. Diameter of valve head	31.8 – 32.0 mm (1.252 – 1.26")	
2. Bevel of valve seating face, valve	29°30'	
3. Bevel of seating face, valve seat insert	30°	
4. Width of seating: valve cone – valve seat insert	1.3 – 1.6 mm (0.051 – 0.063")	
5. Diameter of valve stem	7.963 – 7.975 mm (0.3135 – 0.3139")	Admissible wear: 7.910 mm (0.3114")
6. Valve clearance between adjusting screw and valve stem (cold)	0.15 mm (0.0059")	
Exhaust valve		
7. Diameter of valve head	28.8 – 29.0 mm (1.134 – 1.142")	
8. Bevel of valve seating face, valve	44°30'	

Designation	New	Remarks
9. Bevel of valve seating face, valve insert	45°	
10. Width of seating face valve cone – valve-seat insert	1.6 – 1.9 mm (0.063 – 0.075")	Admissible wear: 7.910 mm (0.3114")
11. Diameter of valve stem	7.940 – 7.950 mm (0.3126 – 0.3130")	
12. Valve clearance between adjusting screw and valve stem (cold)	0.20 mm (0.0079")	
Valve guides		
13. Inside diameters of inlet and exhaust valve guides	7.988 – 8.010 mm (0.3145 – 0.3154")	Admissible wear: 8.080 mm (0.3181")
14. Clearance between valve stem and valve guide		
Inlet	0.013 – 0.047 mm (0.0005 – 0.0019")	Admissible wear: 0.17 mm (0.0067")
Exhaust	0.038 – 0.070 mm (0.0015 – 0.0028")	
Valve springs		
15. Length of springs, unloaded	$46 \pm {}^{2}_{1}$ mm ($1.811" \pm {}^{0.0787"}_{0.0394"}$)	
16. Length of springs, fitted (valve closed)	35 mm (1.378") load being approx. 22 kg (48.5 lb)	
17. Length of springs, fitted (valve entirely open)	27.4 mm (1.0787") load being 44-48 kg (97-106 lb)	Admissible wear not below 40 kg (88 lb)
Cylinders		
1. Cylinder diameter, production	77.0 mm (3.0315")	For pairing cylinders and pistons see Sub-Group "Cylinders and Pistons"
1st oversize	77.0 mm (3.0512")	
2nd oversize	78.0 mm (3.0709")	
Pistons		
1. Piston nominal size, production	76.94 (3.0291"), 76.95 (3.0295"), 76.96 (3.0299"), 76.97 (3.0303")	
1st oversize	77 44 (3.0488"), 77.45 (3.0492"), 77.46 (3.0496"), 77.47 (3.0500")	
2nd oversize	77.94 (3.0685"), 77.95 (3.0688"), 77.96 (3.0693"), 77.97 (3.0697")	Admissible wear: 0.16 mm (0.0063")
2. Clearance between piston and cylinder	0.046 – 0.054 mm (0.0018 – 0.0021")	
3. Diameter of piston boss	19.996 – 20.002 mm (0.78724 – 0.78748")	Admissible wear: 19.988 mm (0.78690")
4. Diameter of piston pin (outside)	19.994 – 20.000 mm (0.78716 – 0.78740")	
5. Diameter of piston pin (inside)	14 mm (0.5512")	
6. Length of piston pin	63 mm (2.4803")	
7. Play between piston pin and piston boss	0.001 (0.00004") – (Pin thicker than bore) 0.005 mm (0.0002") (Pin thinner than bore)	
8. Width of compression ring groove	2.525 – 2.550 mm (0.0994 – 0.1004")	
9. Width of oil scraper ring groove	4.015 – 4.030 mm (0.1581 – 0.1587")	
10. Width of compression ring	2.478 – 2.490 mm (0.0976 – 0.0980")	
11. Width of oil scraper ring	3.978 – 3.990 mm (0.1566 – 0.1571")	
12. Ring-groove clearance of compression rings	0.035 – 0.072 mm (0.0014 – 0.0028")	Admissible wear: 0.1 mm (0.0039")
13. Ring-groove clearance of oil-scraper ring	0.025 – 0.052 mm (0.001 – 0.002")	

Designation	New	Remarks
14. Ring-gap clearance of compression rings	0.30 – 0.45 mm (0.0118 – 0.0157")	Admissible wear: 0.95 mm (0.0374")
15. Ring-gap clearance of oil scraper ring	0.25 – 0.40 mm (0.0098 – 0.0157")	
16. Weight of piston	405 – 415 g (0.893 – 0.915 lb)	
17. Tolerable difference in the weight of engine pistons	10 g – (0.0353 oz)	
Connecting rods		
1. Diameter of connecting rod eye	24.000 – 24.021 mm (0.9449 – 0.9457")	
2. Outside diameter of connecting rod bushing	24.035 – 24.048 mm (0.9463 – 0.9468")	Admissible wear:
3. Inside diameter of connecting rod bushing (with bushing put in place)	20.017 – 20.023 mm (0.7881 – 0.7883")	20.038 mm (0.7889")
4. Length of connecting rod bushing	21 - 0,1 mm (0.8268 - 0.0039")	
5. Play between connecting rod bushing and piston pin	0.017 – 0.029 mm (0.0007 – 0.0011")	Admissible wear: 0.05 mm (0.002")
6. Connecting rod – crank pin Radial clearance	0.001 – 0.007 mm (0.00004 – 0.0003")	
Axial clearance	0.1 – 0.33 mm (0.0039 – 0.0130")	
Crankcase		
1. Diameter of bores, main bearings Bearing, belt pulley side	61.955 – 61.974 mm (2.4392 – 2.4399")	
Bearing, centre bearing	71.955 – 71.974 mm (2.8329 – 2.8336")	
Bearing, flywheel side	71.955 – 71.974 mm (2.8329 – 2.8336")	
Crankshaft		
1. Number, kind and designation of bearings, Belt pulley side	Roller bearing NUL 30	DIN 5412
Centre bearing	Roller bearing R NUL35	DIN 5412
Flywheel side	Ball bearing 6306 C 3	DIN 625
2. Diameter of crank pin for V-belt pulley side	21.996 – 22.009 mm (0.8660 – 0.8665")	
Flywheel	30.002 – 30.011 mm (1.1812 – 1.1815")	
3. Permissible eccentricity of crank pin (Crankshaft put in place) Belt pulley side	max. 0.03 mm (0.0016")	Admissible wear: 0.04 mm (0.0016")
Flywheel side	max. 0.03 mm (0.0016")	0.04 mm (0.0016")
4. Axial clearance of crankshaft	Antifriction bearing!	
5. Radial clearance of crankshaft	Antifriction bearing!	
6. Maximum axial movability of antifriction bearings in the crankcase	0.2 mm (0.0079")	
Flywheel		
1. Diameter of flywheel	196.5 mm (7.7362")	
2. Circumference of flywheel	617 mm (24.2913")	
3. Inside diameter of bore of the crank pin	30.000 – 30.021 mm (1.1811 – 1.1819")	
4. Outside diameter of the collar for radial seal	55.810 – 56.000 mm 2.1972 – 2.2047")	

Designation	New	Remarks
Starter gear rim		
1. Inside diameter of gear rim	170 mm (6.6929")	
2. Outside diameter of gear rim (Addendum circle measured over teeth)	201.3 – 201.5 mm (7.9252" – 7.9331")	
3. Number of teeth	80 teeth	
Carburettor		
1. Parts		
Main jet	120	
Idler jet	0.50	
Venturi	24	
Idler-air jet	1.0	
Air control jet	220	
Base	5	
Mixing chamber	36	
Float needle	1.5	
Weight of plastic float	5.7 g (0.201 oz)	
Fuel pump		
1. Minimum delivery (every 10 strokes)	45 cm³ (2.746 cu. in.)	
2. Length of diaphragm spring (unloaded)	ca. 25 mm (0.9843")	
3. Tension of 16 mm long spring	1.1 – 1.3 kg (2.43 – 2.87 lbs.)	
Oil pump		
1. Axial clearance of gear wheels	0.005 – 0.062 mm (0.0002 – 0.0024")	Admissible wear: 0.15 mm (0.0059")
Ignition		
1. Ignition setting (Centrifugal regulator in rest position)	3° before TDC	
2. Full advance		
Distributor Bosch VJ 2 BL mK and Bosch VJ 2 BL 3 mK	36° ± 3° before TDC over 4000 r.p.m.	
Distributor Bosch VJ 2 BL 5 mK	35° ± 2° before TDC over 4550 r.p.m.	
Compression		
Tested when motor is warm with open throttle, sparking plugs removed, motor turning over with starter motor	7 – 9.5 atü. (99.54 – 135.09 psig)	

Remarks. In the "new" column the measurements and values are for vehicles new from factory.

Admissible wear. If in case of repairs it shows that parts approach or have reached the specified admissable limit values of wear they should not be used any longer, or re-installed, but should be replaced by Genuine Lloyd new or replacement parts.

Amounts of torque to be applied to screw connections in the Lloyd 600

Torque in mkg and foot-pounds

Designation	mkg	ft. lb.
Engine		
Bolts and nuts for crankshaft housing	3	21,6
Bolts and nuts for cylinder head	3,5	25,2
Camshaft housing – cylinder head (up to engine No. 318 600 incl.)	1,5	10,8
Camshaft housing – cylinder head (from engine No. 318 601)	3	21,6
Sprocket for camshaft	1	7,2
* Stud in crankshaft half (expansion bolt for flywheel) (fitted until engine No. 353 562 incl.)	12	87
* Flywheel, hexagon nut (fitted until engine No. 353 562 incl.)	12	87
* Flywheel, hexagon nut (from engnie No. 353 562)	18,5	130
V-pulley on crankshaft	6 - 8	43.4 – 57.9
V-pulley on dynamo	6 ± 0,5	43.4 ± 3.6
Dynamo tension strap	1 - 1,2	7.2 – 8.6
Impeller of fan	6 ± 0,5	43.4 ± 3.6
Splash plates in sump	0,6	4.3
Assembly of oil pump	1,0	7.2
Fitting of oil pump in sump	1,0	7.2
Exhaust manifold	2	14.4
Intake manifold	0,5	3.6
Carburettor	1,1	8
Clutch		
Screws for fitting clutch to flywheel	1	7.2
Gearbox (4-speed synchronised)		
Gear-shifting shaft, hexagon nut M 17	6	43.4
Casing top to bottom, bolt M 8	2,5	18.0
Differential		
Large bevel gear wheel – differential housing		
Bolts M 8 (3-speed gearbox)	3,3	23.9
Bolts M 10 (3-speed gearbox)	5 - 5,5	36 – 39.2
Expansion bolts M 10 (4-speed gearbox)	4,7	34
Inside joint – large differential gear	10 - 12	72 – 87
Front Axle		
Hub – outside drive shaft	9 - 10	65
Silentbloc suspension front springs (from chassis No. 6/263 022 and 6/114 523 resp.)	4,7	34.2
Hexagon bolt for fastening spring on front-axle carrier	5	36
Rear Axle		
Hub – king pin	9 – 10	65 – 72
Chassis		
Front axle carrier – central tube flange	7,6	55

* Grease only slightly before inserting.

Amounts of torque to be applied for screw connections on the Lloyd 600

Designation	mkg	ft. lb.
Steering		
Steering wheel (splined) nut M 20 x 1.5	4	28.8
Steering arm – rack	6 - 8	43.4 – 57.9
Track rod – steering arm	4,5	32.4
Track arm – track rod	4,5	32.4
Track arm – steering knuckle	7,6	55
Wheels		
Wheel – brake drum – wheel studs	7,2	52

Attention!

For the observance of the specified torques the use of a torque wrench is indispensable!

Tigthening of bolts and nuts, the strength of which must conform to the values specified by Lloyd, should be made without grease, with the exception of the stud in the crankshaft half! Furthermore, be sure that threads, spring washers and bearing surfaces on bolt or screw heads, nuts and component parts are free from rust and dirt.