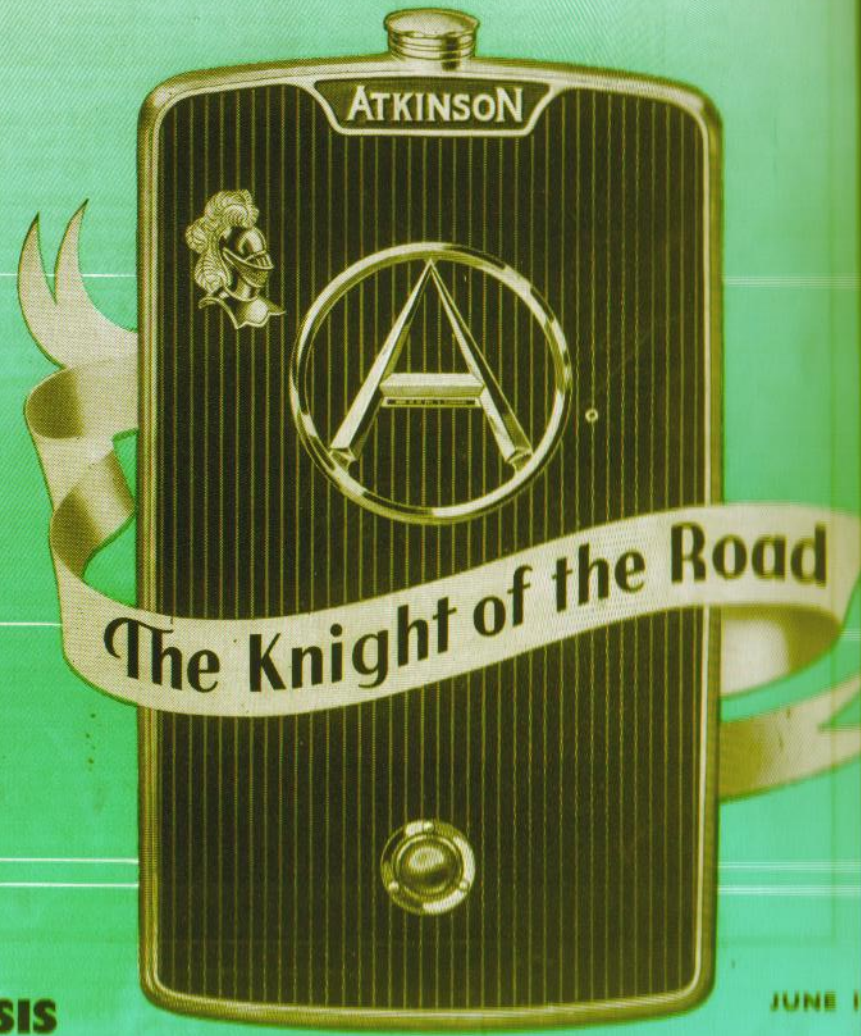
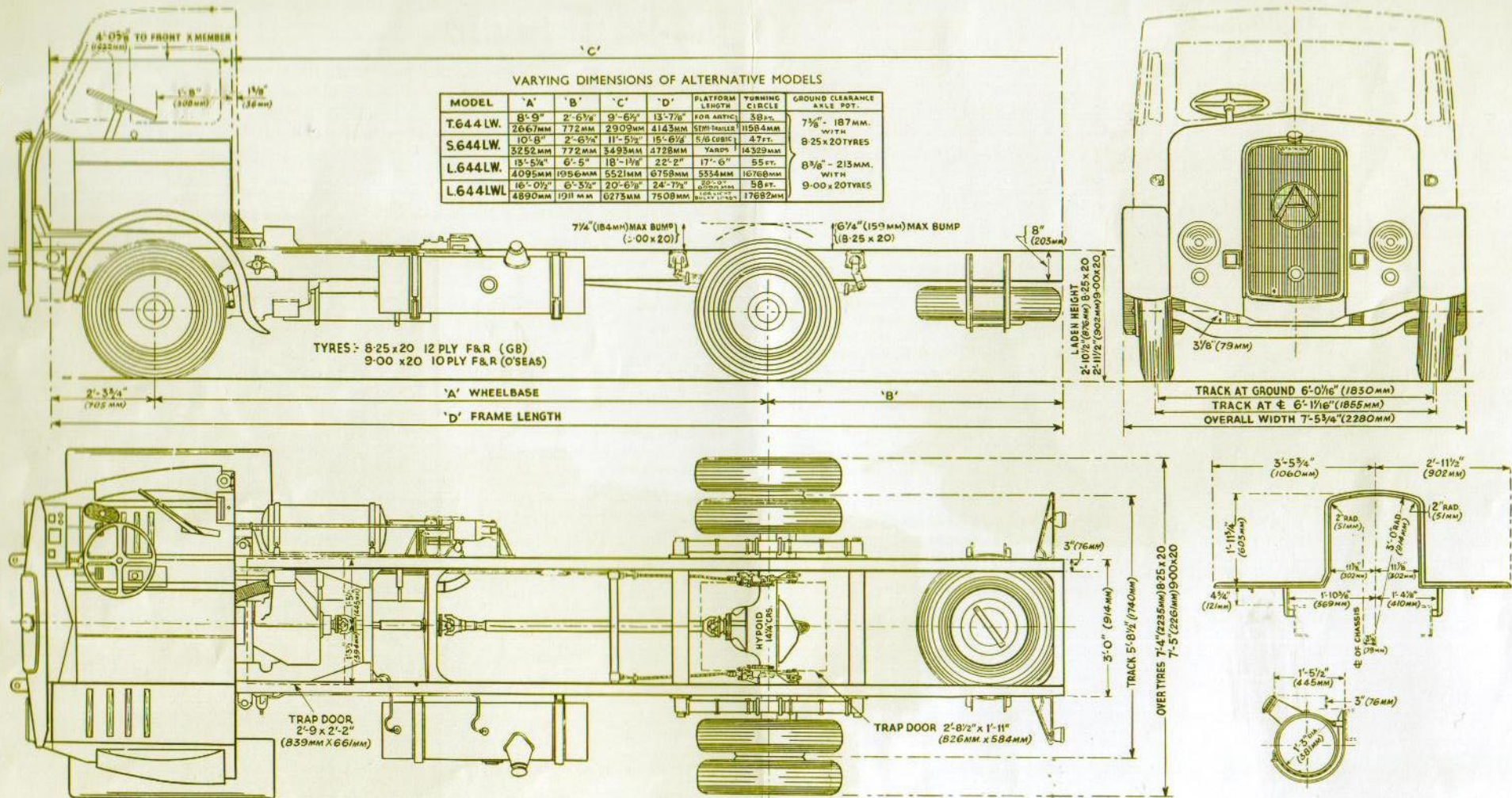


2/12/57



T.644LW _____ **TRACTOR**
S.644LW _____ **4 WHEELED** _____ **TIPPER**
L.644LW _____ **FREIGHT CHASSIS**

Arrangement of Model L644 LW Chassis



ARRANGEMENT OF ATKINSON L644 LW. CHASSIS 4 LW. ENGINE - 045 GEARBOX - HYPOID AXLES

1955 C & U REGULATIONS — 30 FT. OVERALL LENGTH.

MODEL		L 644 LWEXL		LIGHT BULKY LOADS		10 TON		GROSS VEHICLE WEIGHT	
'A'	'B'	'C'	'D'	Frame Section	Platform Length	Turning Circle	Max. Bump Minus 1 inch	Frame Height Laden Plus 1 inch	
18'-0"	8'-11"	25'-2 1/4"	29'-2 1/4"	9" x 3" x 1/2"	24'-6" 7468 mm.	64 ft.			
5486 mm.	2718 mm.	7675 mm.	8910 mm.	229 x 76 x 6 mm.	For Light Bulky Loads	19512 mm.			

ATKINSON 4-WHEELED CHASSIS

MODELS			GROSS VEHICLE WEIGHT
T 644 LW	TRACTOR	16 TON	
S 644 LW	TIPPER	11 TON	
L 644 LW	FREIGHT	11 TON	
L 644 LWL	LIGHT BULKY LOADS	10 TON	
L 644 LWEXL	LIGHT BULKY LOADS	10 TON	

This range of particularly robust chassis embodies the following noteworthy features:—

ENGINE. Is the "Gardner" LW Compression Ignition direct injection diesel unit, having $4\frac{1}{4}$ " bore, 6" stroke.

Engine Type	No. of Cylinders	H.P. at 1,700 r.p.m.	lb./ft. Torque at 1,300 r.p.m.	No. of main bearings
4 LW	4	75	236	5

In the above model the crankshaft is carried in a deep section rigid crankcase, the dry lined cylinders being arranged in twin blocks, with detachable heads and overhead valve location; pistons are fitted with chromium plated gas rings, all features ensuring long life with ease of maintenance. Forced lubrication to all crankshaft bearings is provided by submerged gear pump housed in the large capacity sump, with strainers on both suction and delivery circuits. Cool air manifolding is standard, and air cleaner can be fitted if required. Ample cooling is provided by the large diameter fan and centrifugal water pump, the system being thermostatically controlled. The particular feature of this unit is fuel economy ensured by the specially designed fuel pump, controlling by centrifugal governor the amount of fuel injected. Ready starting from cold by electric starter and positively driven dynamo are other features. The engine as a unit, with clutch and gear box, is three point mounted, with rubber insulation at each location. Air cleaner is standard.

CLUTCH. Is a 14" single dry-plate type, provided with a clutch stop and ample two-stage adjustment to cater for full liner wear. Clutch slip torque is 320 lb. ft., more than equal to all calls from the driver and yet smooth in operation under all conditions.

GEAR BOX. Mounted as a unit with the engine. This unit has five forward speeds and reverse (top gear is an overspeed and fourth direct when an hypoid axle is fitted, or top gear is direct when an Eaton 2-speed axle is fitted) controlled by one change speed lever only. All gears are in high quality heat treated alloy steel, mounted on large diameter rigid shafts, carried on bearings of ample capacity. The ratios are particularly selected to suit the arduous duties the chassis will perform, and are as follows:—

		HYPOID		EATON 16500	
Axle Ratio		5-83		4-89 / 6-8	
Tyres		8-25-20 (12 ply)		8-25-20 (12 ply)	
Engine R.P.M.		1700		1700	
Gear	Ratio	Road Speed	M.P.H.	Ratio	Road Speed M.P.H.
Fifth	... 0-75 :1	42		1 :1	37-5 27
Fourth	... 1 :1	31-4		1-59:1	23-5 17
Third	... 1-795:1	17-45		2-48:1	15-1 10-9
Second	... 3-24 :1	9-7		3-91:1	9-6 6-9
First	... 6-09 :1	5-16		6-52:1	5-73 4-14
Reverse	... 5-98 :1	5-25		6-4 :1	5-85 4-22

TRANSMISSION. Power is transmitted to the driving axle by two tubular propeller shafts on the L 644 LW and L 644 LWL, and one on the T 644 LW and S 644 LW models. Incorporating needle roller bearing wide angle universal joints, and sliding coupling to allow full axle articulation. All shafts are dynamically balanced to eliminate vibration.

REAR AXLE. Drive to the road wheels is provided by an hypoid axle having $14\frac{1}{4}$ " centres, fitted with a standard ratio of 5-83 to 1, with the following alternative ratios available to suit the conditions required, i.e., 6-5 and 7-16 to 1. The axle is fully floating, dropped forged hubs being mounted on ample capacity taper roller bearings, in turn mounted on a one piece axle casing.

ALTERNATIVE rear axle available is the Eaton two speed type 16500 with ratios of 4-89/6-8 to 1. The bevel and pinion assembly is carried on taper roller bearings. Crown wheel and differential are built as a readily removable unit. The axle is fully floating, and dropped forged hubs are mounted on ample capacity taper roller bearings. The control of the gears is by push-button, fixed to the gear box change speed lever, and is either vacuum or electrically controlled.

FRONT AXLE. This unit incorporates a one-piece I section high tensile steel beam of generous proportions, with forged steel hubs mounted on taper roller bearings. The king pins are mounted on special thrust bearings to provide easy steering, the ball jointed adjustable track rod being mounted at the rear.

ROAD SPRINGS. Front and rear are semi-elliptic, silico manganese steel of suitable length, shackled at the rear, to ensure smooth riding under all conditions.

BRAKING SYSTEM. The footbrake acts on all wheels and is hydraulic vacuum assisted. Drum diameters and brake shoe widths being 16" x 3" on front axle, 16" x 5" on hypoid, and $15\frac{1}{2}$ " x 5" on Eaton 16500 type rear axles, all being internal expanding type. The ratchet type hand brake, located to the right hand, acts on the rear wheels only, and is mechanically operated throughout.

ROAD WHEELS AND TYRES. Pressed steel disc wheels are carried on the hubs by eight $\frac{3}{8}$ " diameter wheel studs, tyres being 8-25-20 (12 ply) single front and twin rear or alternatively, Michelin 'X' Type single front and twin rear.

STEERING. Is of the Marles Cam and double roller type, totally enclosed and working in oil. All contacting surfaces are of hardened alloy steel, wear being minimised and development of backlash practically eliminated. Can be supplied with either right or left hand steering and controls.

FRAME. Frame side members are of high tensile steel pressings $8" \times 3" \times \frac{1}{4}"$, on all models except the L 644 LWL which are of $9" \times 3" \times \frac{1}{4}"$, braced by substantial tubular and pressed steel cross-members fitted with high tensile steel bolts.

RADIATOR. Is of the detachable "Still" or "Withnell" tube type, with separate top and bottom tanks of ample water capacity. Temperature control is by thermostat, allowing quick warm-up under cold conditions.

FUEL TANK. Is of 30 gallon capacity on the T 644 LW and S 644 LW, and of 32 gallon capacity on the L 644 LW and L 644 LWL, mounted on the near-side of the chassis frame. Feed is by Amal pump mounted on and driven by the engine.

ELECTRICAL EQUIPMENT. Is 12 volt double pole system, with batteries of ample capacity; instruments housed in panel in front of driver; twin head, side and stop/tail lamps are provided, head lamps controlled by dipper switch. Electric starting is standard.

CHASSIS EQUIPMENT. Includes speedometer, electric horn, hydraulic jack, loose starting handle, rear number plate, grease gun, complete set of tools and wheel stud covers; lubrication chart, wiring diagram, service manual and spare parts lists are provided with each chassis.

- EXTRAS.**
- Coil or leaf spring rear towing jaw.
 - Front towing member.
 - Front bumper bar (chromium).
 - Trailer brake hand and/or power operated (power operated standard on T 644 LW).
 - Air Pressure brakes.
 - Power take-off (Gear box driven).
 - 5 LW engine, 4, 5 or 6 speed gear box.
 - 24 volt starting with 12/24 lighting.
 - Atkinson coach built cab.

EXPORT FEATURES.

GEARBOX. Direct top type standard with the Hypoid or Eaton axles in the T 644 LW model.

ROAD WHEELS AND TYRES. 9-00-20 (10 ply) or Michelin Metallic tyres of equivalent rated capacity, single front and twin rear are fitted for all overseas models.

STEERING. Right or left hand steering and controls can be provided.

RADIATOR. Tropical type can be supplied for extreme temperature conditions.

EXTRAS. Coach built driver's cab or all steel driver's cab.

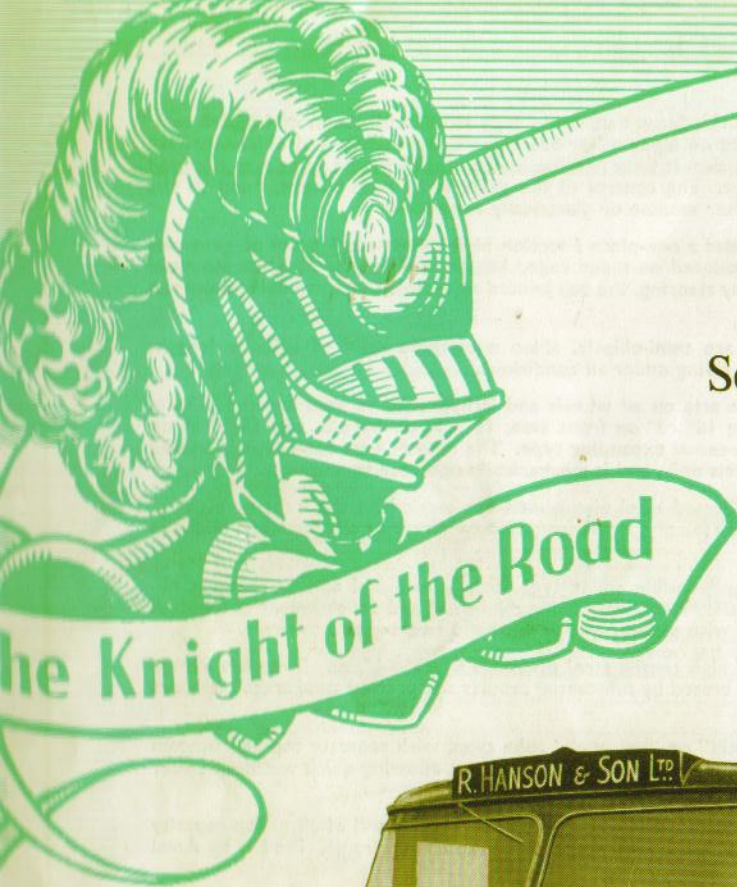
ATKINSON VEHICLES LIMITED, Winery Lane, Walton-Le-Dale, Preston, Lancs.

'Phone: 84284 (4 lines) & 56217

Telegrams: "Wagons, Preston"

Spares & Service: 'Phone: 56217 (Day & Night)

LONDON SALES & SERVICE: Western Lane, Nightingale Lane, S.W.12. Battersea 2193



Model L644 LW
4-wheeled
Seven-ton Freight Chassis

