

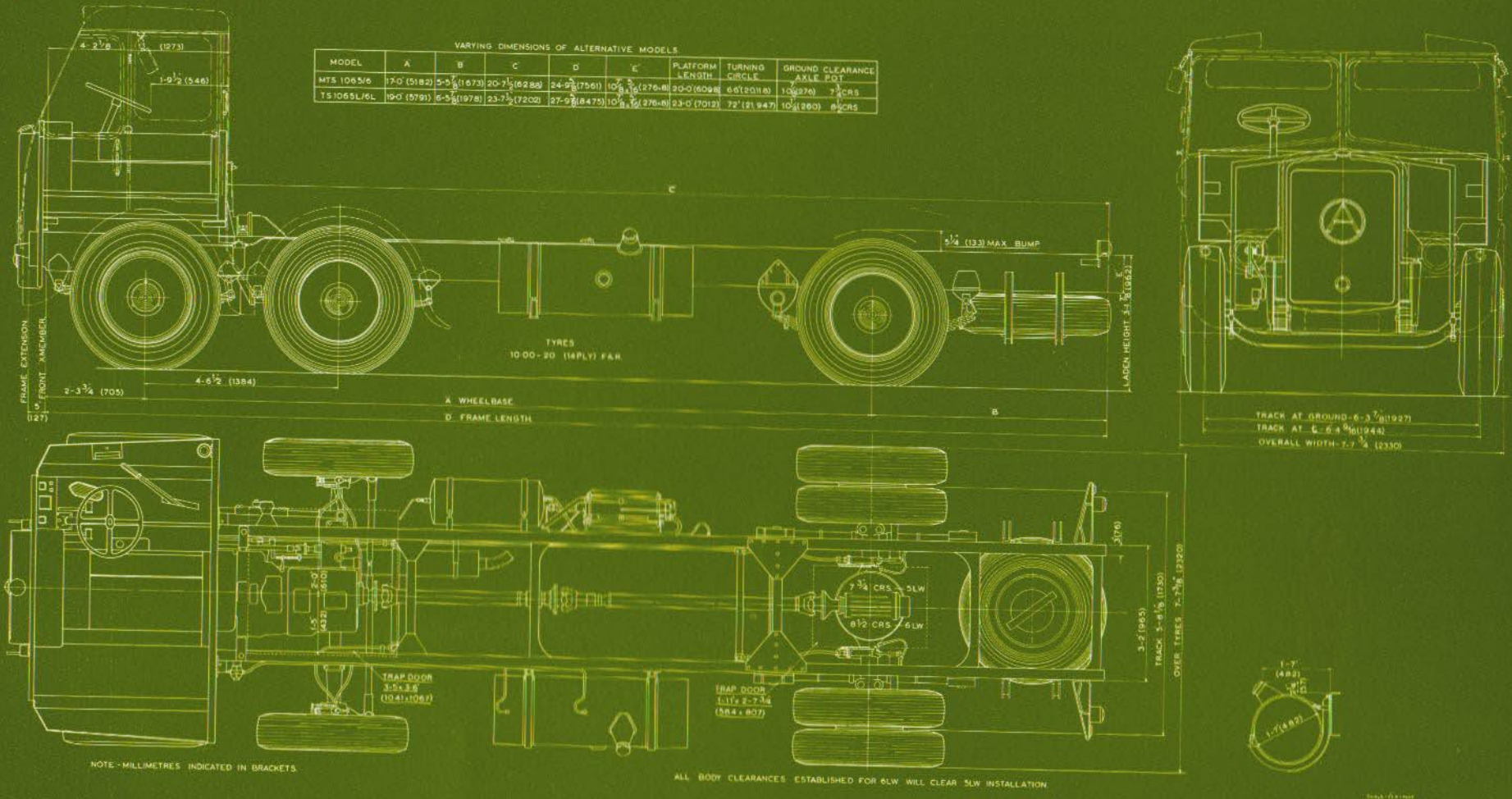
RANGEABILITY by

Atkinson



TWIN STEERING 6 WHEELED FREIGHT CHASSIS
(TS 1065/6 Series)

Arrangement of Atkinson TS 1065/6 Series Chassis



Rangeability - Serviceability - Reliability

ATKINSON 6 WHEELED CHASSIS

MTS1065/6
TS1065L/6L

FREIGHT 16 TON

GROSS VEHICLE
WEIGHT

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

ENGINE. The basic engine is the Gardner LW compression ignition direct injection diesel unit, having 4½" bore and 6" stroke. Brief data concerning this engine is given below, together with details of alternative engines which can be fitted as extras.

The crankshaft is carried in a deep section rigid crankcase, the dry lined cylinders being arranged in two 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. A large and efficient air cleaner is a standard feature on all models. 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 gearbox, is three point mounted with rubber insulation at each location.

Engine Type	Bore ins.	Stroke ins.	B.H.P. at R.P.M.	Lbs.Ft. Torque at R.P.M.
Gardner 5LW	4½	6	94 at 1700	300 at r.p.m.
Gardner 6LW	4½	6	112 at 1700	358 at r.p.m.
Gardner 6LX	4½	6	150 at 1700	485 at r.p.m.

CLUTCH. Is a 16" single dry plate unit, provided with a clutch stop and ample two stage adjustment to cater for full liner wear, clutch slip torque is 510 lbs.ft., more than equal to all calls from the driver, and yet smooth in operation under all conditions.

GEARBOX. Mounted as a unit with the engine, all gears are in high quality heat treated alloy steel mounted on large diameter rigid shafts, carried on bearings of ample capacity. Control is by one change speed lever. The various types of gearboxes available, together with the road speeds in each gear are shown in the adjacent chart.

TRANSMISSION. Power is transmitted to the driving axle by two piece tubular propeller shafts incorporating needle roller bearing wide angle universal joints and sliding coupling to allow full axle articulation. Supported at the centre by a self-aligning ball race. All shafts are dynamically balanced to eliminate vibration.

REAR AXLE. Drive to the rear wheels is provided by an overhead worm axle on models fitted with LW engines. Worm centres are 8½" and the standard ratio is 6½ : 1 with a wide choice of alternative ratios available. Models fitted with 6LX and larger engines use a rear axle with a spiral bevel primary reduction followed by a secondary reduction by double helical spur gears. Standard ratio is 6.27 : 1 and alternative ratios of 7.01 and 7.94 : 1 are available. All axles are fully floating, the drop forged hubs being mounted on ample capacity taper roller bearings, in turn mounted on a solid one piece forged axle casing.

FRONT AXLE. The twin front axles are independently sprung, each having a one piece I section high tensile steel beam of ample proportions with forged steel hubs mounted on taper roller bearings. The king pins are also mounted on taper roller bearings providing easy steering. The ball jointed adjustable track rods are mounted at the rear of each axle.

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 foot brake acts on all wheels and is hydraulic with hydrovac assistance, drums on all wheels are 17" diameter, the front shoes being 3½" wide and the rear 6" wide all being internal expanding. The ratchet type hand brake located to the right hand acts on the rearmost front and rear axle wheels only and is mechanically operated throughout.

ROAD WHEELS AND TYRES. Pressed steel disc wheels are mounted on the hubs by ten ½" diameter wheel studs, tyres being 10.00×20 (14 ply) single front and twin rear.

STEERING. Is the Marles cam and 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. Right or left hand steering can be provided as required.

Both front axles are interconnected by a twin drag link arrangement, the geometry being so arranged to provide the accurate lock angles required in this form of construction, eliminating uneven tyre wear.

FRAME. Frame side-members are high tensile steel pressings 10½"×3"×½" braced by substantial pressed steel cross-members with high tensile fitted bolts.

RADIATOR. Is the detachable "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 mounted on the nearside of the chassis frame, and fuel feed is by Amal pump mounted on, and driven by the engine. Standard fuel tank capacity is 54 gallons.

ELECTRICAL EQUIPMENT. Is 12 volt on the LW range (with 24 volt alternative) and 24 volt on larger engines. The system in each case is the double pole type. Twin head, side, and stop/tail lamps are provided, head lamps being the double dipping type controlled by separate dipper switch. Electric starting is standard.

CHASSIS EQUIPMENT. Includes speedometer, electric horn, hydraulic jack, loose starting handle, rear number plates, 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.

Cabs:—	ZF 6 speed direct top or overspeed gearbox.
Standard coachbuilt cab.	Front towing member.
Heavy duty coachbuilt fibreglass de-luxe cab.	Front bumper bar (chromium). Coil or leaf spring rear towing jaw.
All steel cab.	Power and/or hand trailer brake.
Engines:—	Air pressure, or air/hydraulic brakes.
Gardner 6LX	Power take off (gearbox driven). Gearbox top drive (full torque).
Cab heater and demister.	Power take off controls.
Auxiliary step-up or step-down gearbox.	

Details to conform to petroleum regulations.

EXPORT FEATURES.

Road Wheels and Tyres.—11.00×20 (12 ply) tyres, single front and twin rear are fitted to all export models.

Steering.—Right or left hand steering and controls can be provided.

Radiator.—Tropical type can be supplied for extreme temperature conditions with integral oil cooler on 6LW models).

ROAD SPEEDS

5LW Engine Model 557 Constant Mesh Direct Top Gearbox	Road Speeds with Worm Axle 6½ : 1 ratio	6LW Engine Model 557CM Constant Mesh Direct Top Gearbox	Road Speeds with Worm Axle 6½ : 1 ratio
Ratio	m.p.h.	Ratio	m.p.h.
1 : 1	30	1 : 1	31.4
1.565 : 1	19.2	1.565 : 1	20.6
2.74 : 1	11.0	2.74 : 1	11.8
4.68 : 1	6.4	4.68 : 1	6.9
7.92 : 1	3.65	7.92 : 1	4.1
7.92 : 1	3.65	7.92 : 1	4.1

6LX Engine Model 557/480 Constant Mesh Overspeed Gearbox	Road Speeds with Bevel-Double Helical Axle Ratio 6.27 : 1
Ratio	m.p.h.
.776 : 1	42.0
1 : 1	32.4
1.76 : 1	18.4
3.34 : 1	9.7
6.05 : 1	5.2
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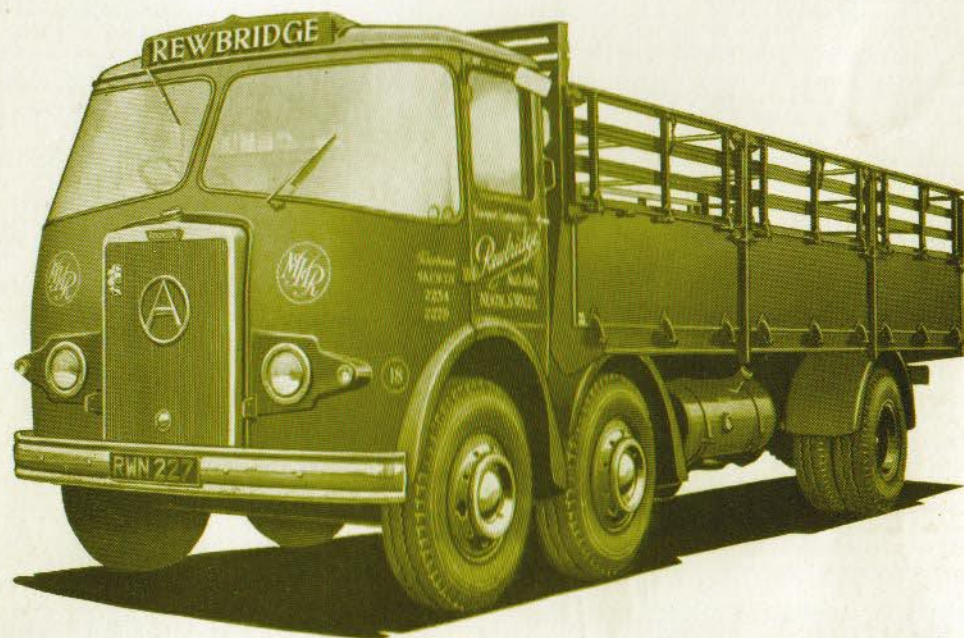
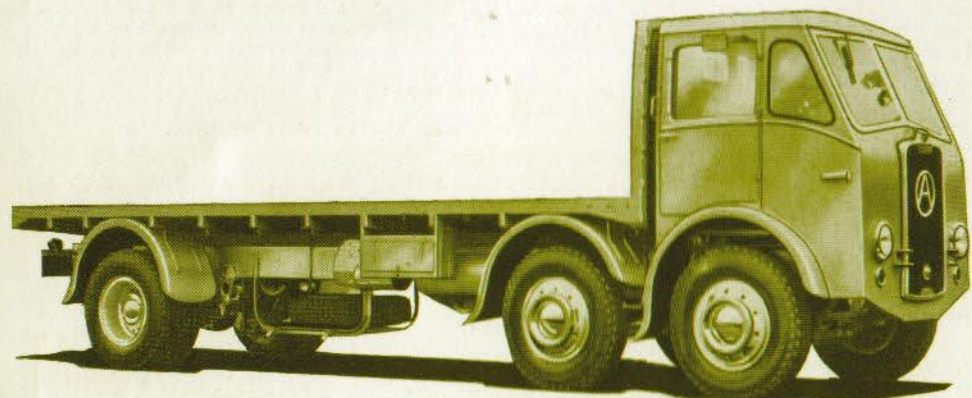
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ATKINSON VEHICLES LTD.

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