

Leaflet No. L733C.

**TRACTOR MODEL**

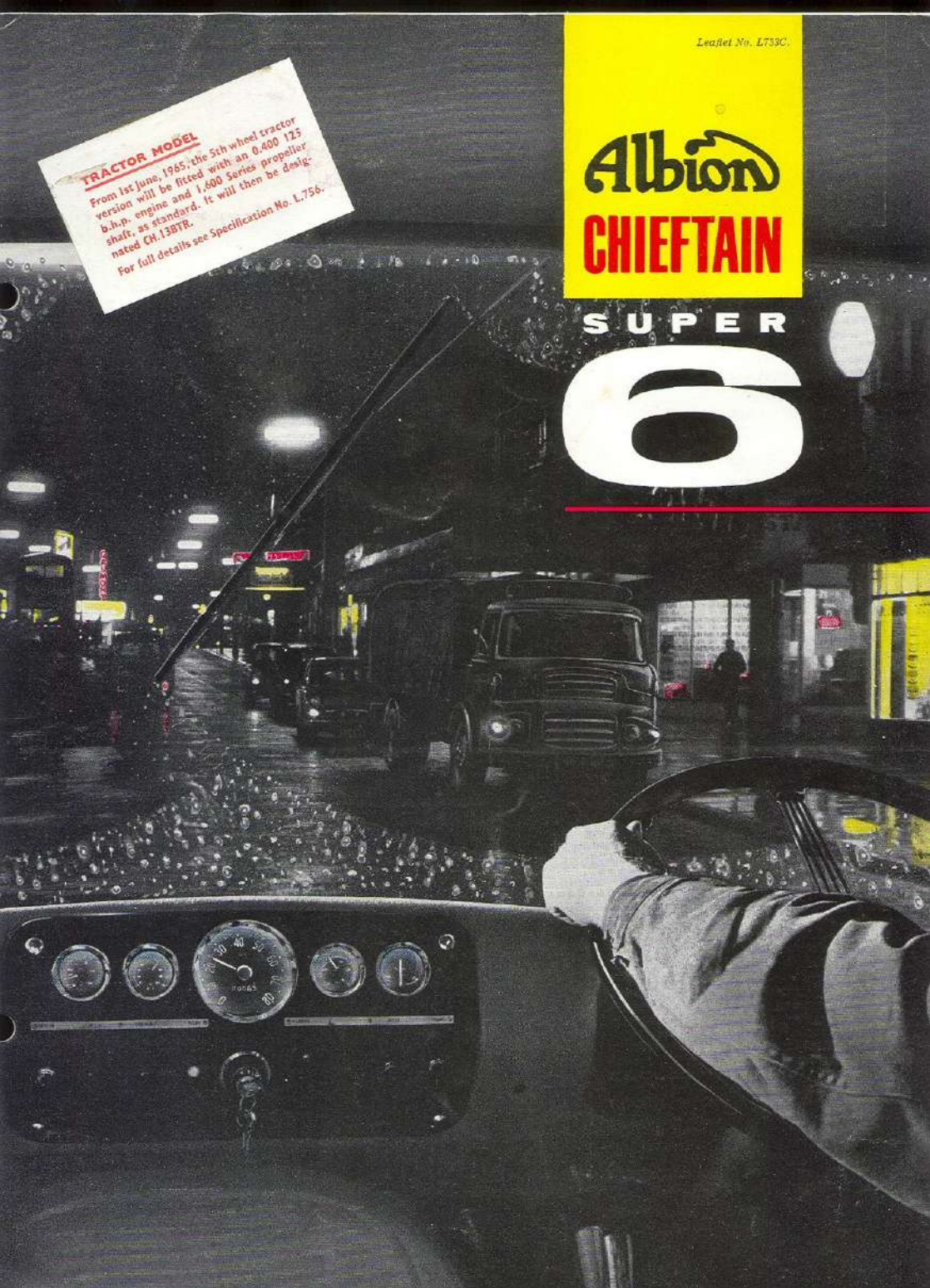
From 1st June, 1965, the 5th wheel tractor version will be fitted with an 0.600 125 b.h.p. engine and 1.600 Series propeller shaft, as standard. It will then be designated CH.13BTR.

For full details see Specification No. L.756.

**Albion**  
**CHIEFTAIN**

**SUPER**

**6**



# Albion

## RUGGED CHASSIS WITH BOLTED

The Chieftain Super Six range sets a new standard in 7-tonner design. It is built to tackle the toughest jobs and maintain fast operating schedules.

The Leyland "Power-Plus" O.370 engine gives top performance with a reserve of power for arduous conditions and incorporates many new features which guarantee trouble-free service with stringent fuel economy.

Power is transmitted through a 14-in. hydraulically operated clutch and robust 5-speed gearbox, with optional overdrive ratio, to a heavy-duty hub-reduction rear axle which has already proved its merit in the toughest service.

Powerful air operated hydraulic brakes with large lining areas ensure maximum safety, while the re-circulatory ball type variable ratio steering provides easy manoeuvrability and exceptionally light control at speed.

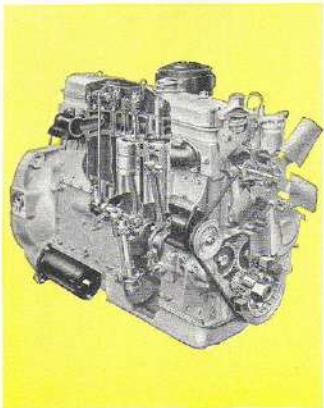


## O.370 HIGH EFFICIENCY DIESEL

This 6-cylinder high-speed diesel has a net output of 106 b.h.p. at 2,200 r.p.m., and a maximum torque of 272 lb. ft. at 1,600 r.p.m. Of entirely new design, but backed by traditional Leyland engineering, the O.370 is designed and manufactured to meticulous standards of accuracy. Excellent aspiration and cylinder scavenging are obtained from the cross-flow cylinder head which positions inlet and exhaust manifolds on opposite sides of the engine, and inlet and exhaust valves alternately along the head.

The radial arrangement of six cylinder head studs around each cylinder bore ensures equal stud loading and freedom from thermal distortion.

Renewable hardened cast-iron cylinder liners, a heavy-duty nitrided seven-bearing crankshaft with torsional vibration damper and high efficiency mechanically governed fuel injection equipment, are among the features contributing to a long-life capacity for hard work.



# FRAME CONSTRUCTION

All models are of the forward control type and are available with left- or right-hand driving controls. The range consists of three haulage models, three tipper models and a tractor for fifth-wheel coupling. The solo vehicles operate at a gross vehicle weight of 222 cwt. (24,864 lb., 11,278 kg.) and the tractor with semi-trailer at 358 cwt. (40,096 lb., 18,187 kg.) gross train weight.

Robust frame construction is an outstanding feature of the Chieftain Super Six. Extra strength has been added to the load carrying portion of the frame on all models by full depth reversed "L" flitch plates, which extend from the rear cab mounting to the frame ends. The frame is well braced by stay tubes and pressed steel crossmembers bolted in position, while fitted bolts linking road spring brackets to stay tubes reduce frame stresses to a minimum.

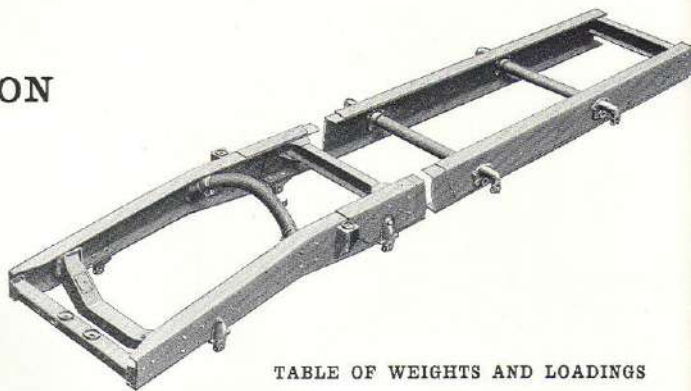
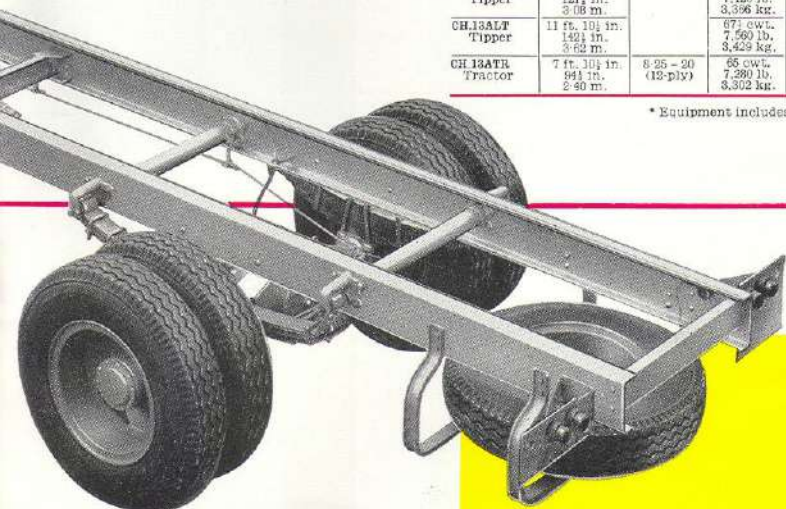


TABLE OF WEIGHTS AND LOADINGS

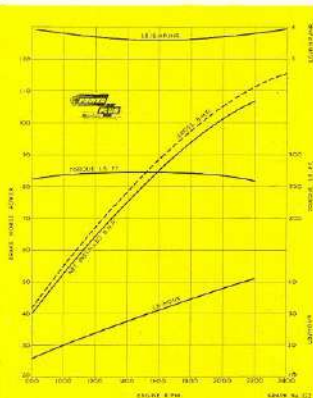
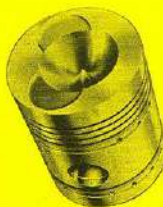
Model	Wheelbase	Tyre Equipment	Chassis and Cab Weight (dry)	Equipment	Payload Plus Body	Gross Vehicle Weight	Turning Circle
CH 13AN Haulage	10 ft. 11 in. 323 in. 8.08 m.		571 cwt. 7,520 lb. 3,417 kg.	41 cwt. 476 lb. 215 kg.	1504 cwt. 16,856 lb. 7,645 kg.		42 ft. 504 in. 12.80 m.
CH 13AL Haulage	11 ft. 10 1/2 in. 342 1/2 in. 8.62 m.		581 cwt. 7,673 lb. 3,490 kg.	41 cwt. 476 lb. 215 kg.	1491 cwt. 16,716 lb. 7,592 kg.		49 ft. 588 in. 14.94 m.
CH 13AXL Haulage	13 ft. 4 1/2 in. 391 in. 9.98 m.	8-25 - 20 (14-ply)	593 cwt. 7,812 lb. 3,544 kg.	41 cwt. 476 lb. 215 kg.	148 cwt. 16,576 lb. 7,513 kg.	222 cwt. 24,864 lb. 11,278 kg.	54 ft. 648 in. 16.48 m.
CH 13AT Tipper	8 ft. 4 1/2 in. 253 in. 6.43 m.		561 cwt. 7,351 lb. 3,341 kg.	41 cwt. 476 lb. 215 kg.	153 cwt. 17,025 lb. 7,721 kg.		37 ft. 444 in. 11.28 m.
CH 13ANT Tipper	10 ft. 1 1/2 in. 308 in. 7.77 m.		581 cwt. 7,420 lb. 3,356 kg.	41 cwt. 476 lb. 215 kg.	1514 cwt. 16,968 lb. 7,599 kg.		42 ft. 504 in. 12.80 m.
CH 13ALT Tipper	11 ft. 10 1/2 in. 342 1/2 in. 8.62 m.		577 cwt. 7,560 lb. 3,429 kg.	41 cwt. 476 lb. 215 kg.	1502 cwt. 16,828 lb. 7,633 kg.		49 ft. 588 in. 14.94 m.
CH 13ATR Tractor	7 ft. 10 1/2 in. 241 in. 6.20 m.	8-25 - 20 (12-ply)	56 cwt. 7,280 lb. 3,302 kg.	54 cwt. 616 lb. 279 kg.	—	358 cwt. 40,096 lb. 18,187 kg.	35 ft. 420 in. 10.67 m.

\* Equipment includes water, full tank of fuel, spare wheel and tools.



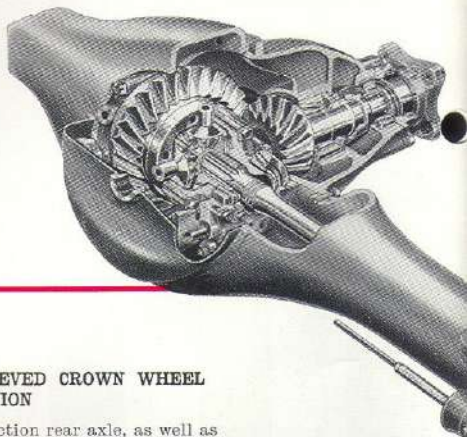
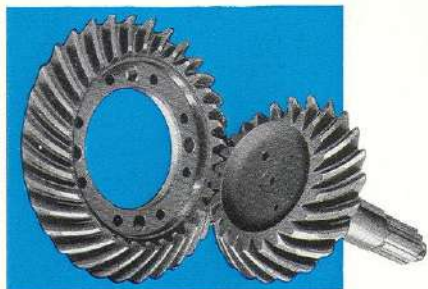
## SPHEROIDAL COMBUSTION CHAMBER

Power-Plus engines incorporate Leyland's latest technical development - the spheroidal combustion chamber. Far in advance of the normal toroidal cavity, this form of combustion chamber, working in conjunction with Leyland multi-hole injectors, atomises and mixes the fuel to a degree hitherto unknown, and extracts the maximum power from it.



## SPIRAL BEVEL AXLE WITH HUB REDUCTION

Designed to withstand the most rigorous treatment, this axle gives increased strength with reduced weight. The drive from the axle input flange uses two reduction ratios, one at the bevel and the other in the hubs, thus permitting the use of a very substantial bevel pinion driving a rigidly supported crown wheel bevel gear and differential unit. Oil filled into the centre casing lubricates the whole axle including the hub gear and the taper-roller bearings supporting the hubs.

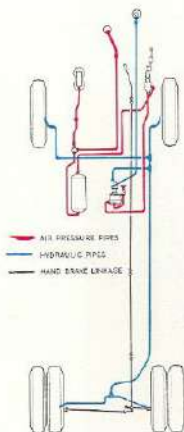


### STRESS-RELIEVED CROWN WHEEL AND PINION

The hub reduction rear axle, as well as reducing torque transmitted by the axle shafts, reduces the stress in the crown wheel and pinion to an extremely low level.

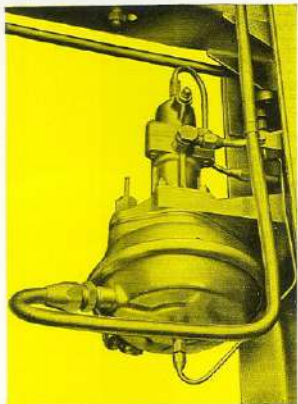
The usual disparity in size between the pinion and crown wheel that exists on conventional axles is ousted and the pinion is generously dimensioned - eliminating a potential trouble spot - another example of forward-thinking design.

## AIR OPERATED HYDRAULIC BRAKES



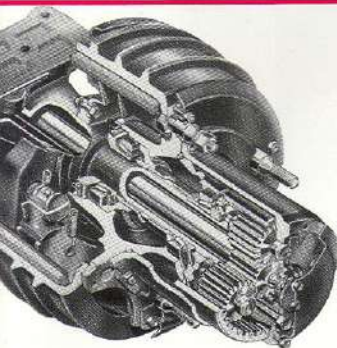
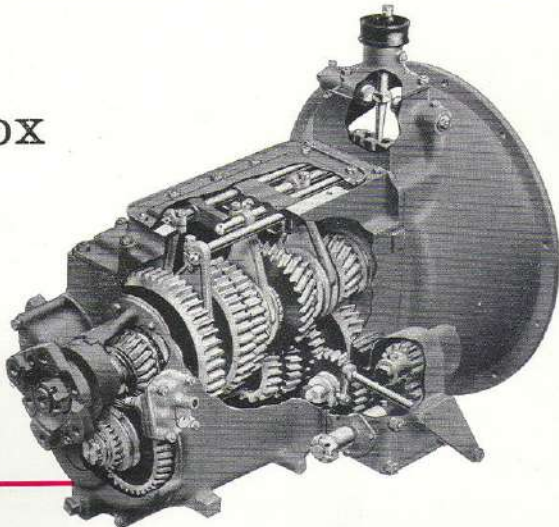
In the air-over-hydraulic system installed on the Chieftain Super Six the compressed air generated is converted into hydraulic pressure. The footbrake pedal is directly coupled to the air control valve, which is fed from a high capacity air pressure reservoir. Air pressure is provided by a twin-cylinder compressor mounted on the engine. The "two-leading-shoe" type hydraulic brake assemblies are equipped with large area moulded linings which show a high degree of resistance to wear and fade.

The handbrake is directly coupled to the rear wheel shoes by mechanical linkage.  
Total effective braking area 615 sq. in. (3,963 sq. cm.).



## 5-SPEED GEARBOX

The 5-speed gearbox is a real heavy-duty unit with large diameter shafts carrying wide-faced gears. All gears are of case-hardened nickel-chrome steel, forward gears running in constant mesh, and engaged by sliding dog clutches. The 3rd, 4th and 5th speeds have helical gears to ensure silent running. To improve fuel economy, or obtain a higher road speed, a helical toothed overdrive 6th speed, with a 0.76 to 1 ratio, can be incorporated at an extra charge. Provision has been made for the fitting of a low or high-speed power take-off on the side of the box.



### EPICYCLIC HUB REDUCTION

The hub reduction is provided by epicyclic gearing, comprising a case-hardened sun wheel machined on the axle shaft, and three planet wheels which rotate in a fixed annulus, transmitting the drive to the hubs. The sun wheel floats in mesh with the planets, so that the driving forces are evenly distributed on the three gears and their bearings.

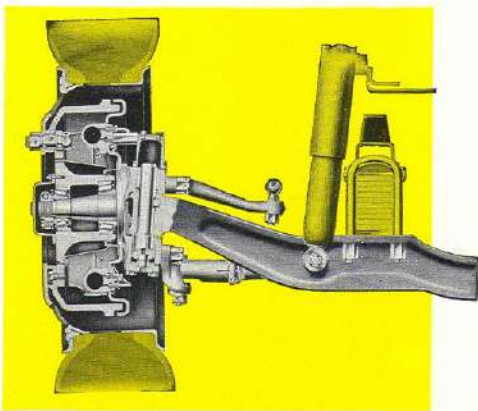
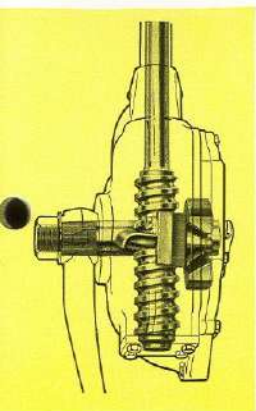
Axle shafts are lightly stressed, the torque applied to them being a quarter of that in a conventional axle.

### RE-CIRCULATORY BALL TYPE STEERING

The high efficiency Barman re-circulatory ball type steering unit fitted has a variable ratio which increases as the steering lock is applied, and thus greatly reduces the effort expended in manoeuvring a laden vehicle. The rolling action of the balls reduces friction to a minimum and ensures easy, positive control at all road speeds.

### WELL DESIGNED FRONT HUBS

The well-proportioned stub axles, machined from steel forgings, are carried in phosphor-bronze bushes. A hardened steel thrust button, specially treated to prolong life, takes the king pin thrust centrally on a single point at the base of the pin. Wheel hubs are mounted on large taper roller bearings which are packed with grease. Efficient oil seals and throwers are incorporated in the design to prevent oil and grease coming into contact with the braking surfaces.



## COMPREHENSIVE RANGE OF CHASSIS

THE CHIEFTAIN SUPER SIX RANGE CONSISTS OF SEVEN  
HIGH PERFORMANCE CHASSIS SUITABLE FOR A WIDE  
VARIETY OF BODIES



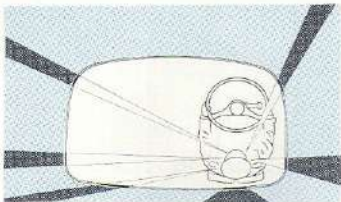
# PRESSED STEEL EASY-ACCESS LUXURY CAB

## SCIENTIFICALLY-STRESSED CAB SUB-STRUCTURE

The steel cab sub-structure consisting of deep box section pressings welded together, promotes strength and long life for the whole cab structure. One-piece door frames reduce any possibility of distortion. All under-surfaces are fully treated with weather sealing and great attention has been given to draught-sealing and thermal insulation.

## ALL-ROUND VISION

Full curved windscreen with twin wipers, swivelling quarter lights and full-drop winding windows, supplemented by a central rear window with curved quarter lights on each side, ensure perfect all-round visibility. The total glazing area is approximately 3,000 sq. in. (19,355 sq. cm.).



## LUXURY CAB WITH CAR COMFORT

This modern cab offers every driving comfort. Its double skin with glass-fibre insulation - foam rubber seats - all-round visibility - flexible cab mountings, and well placed controls, all contribute to banish driving tension by eliminating strain and effort. Luxuries available include a built-in radio, and a de-luxe heating and ventilating system incorporating a powerful demister for the wrap-around windscreen.

## EASY ACCESS

Easy access to the cab is a great feature; one step from the kerb and you're in. The comfortable driver's seat is adjustable vertically and longitudinally. The underside surfaces of cab and front wings are treated with weather sealing.

