

Albion

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New **CLYDESDALE**

9 TONNER

THE AUTOMOBILE ASSOCIATION
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A RANGE OF CHASSIS WHICH INCLUDES HAULAGE,
TIPPERS AND TRACTOR MODELS.

GROSS VEHICLE WEIGHT 14 TONS.

SETS A NEW STANDARD IN EFFICIENCY AND ECONOMY

ENGINEERED FOR LOW COST OPERATION**ALBION CLYDESDALE**

An entirely new range of chassis designed to operate at a gross vehicle weight of 14 tons (14,225 kg.) as solo vehicles, and 358 cwt. (18,187 kg.) in the case of the tractor model with semi-trailer.

- ★ **NEW 6-17 LITRE 6-CYLINDER DIESEL** de-rated for economy
- ★ **HUB REDUCTION REAR AXLE** of great strength.
- ★ **EASY CHANGE 5-SPEED GEARBOX** with overdrive 6th
- ★ **LUXURY PRESSED-STEEL CAB** with all-round vision.
- ★ **AIR PRESSURE BRAKES** TO reduce driving fatigue.
- ★ **WHEELBASES TO SUIT BODY** lengths up to 23 ft. 9 in.
- ★ **7 ft. 6 in. OR 8 ft. 0 in.** overall width.
- ★ **RIGHT OR LEFT-HAND** driving controls.

MODELS AND APPROXIMATE WEIGHTS

Model	Wheelbase	Overall Width	Tyre Equipment	Approx. Chassis and Cab Weight (dry)	Equipment*	Pay Load Plus Body	Gross Vehicle Weight
CD.21 Y Haulage	ft. in. 12 0 (3 658m.)	ft. in. 7 6 (2 286m.)	10-00—20 14 ply	79 cwt. (4,013 kg.)	5½ cwt. (279 kg.)	195½ cwt. (9,932 kg.)	280 cwt. (14,225 kg.)
CD.21 YW Haulage	12 0 (3 658m.)	8 0 (2 438m.)	10-00—20 14 ply	81 cwt. (4,115 kg.)	5½ cwt. (279 kg.)	193½ cwt. (9,830 kg.)	280 cwt. (14,225 kg.)
CD.21 N Haulage	13 6 (4 115m.)	7 6 (2 286m.)	10-00—20 14 ply	78 cwt. (3,963 kg.)	5½ cwt. (279 kg.)	196½ cwt. (9,983 kg.)	280 cwt. (14,225 kg.)
CD.21 NW Haulage	13 6 (4 115m.)	8 0 (2 438m.)	10-00—20 14 ply	80 cwt. (4,064 kg.)	5½ cwt. (279 kg.)	194½ cwt. (9,881 kg.)	280 cwt. (14,225 kg.)
CD.21 L Haulage	15 0 (4 572m.)	7 6 (2 286m.)	10-00—20 14 ply	79 cwt. (4,013 kg.)	5½ cwt. (279 kg.)	195½ cwt. (9,932 kg.)	280 cwt. (14,225 kg.)
CD.21 LW Haulage	15 0 (4 572m.)	8 0 (2 438m.)	10-00—20 14 ply	81 cwt. (4,115 kg.)	5½ cwt. (279 kg.)	193½ cwt. (9,830 kg.)	280 cwt. (14,225 kg.)
CD.21 XL Haulage	17 6 (5 334m.)	7 6 (2 286m.)	10-00—20 14 ply	84 cwt. (4,267 kg.)	5½ cwt. (279 kg.)	190½ cwt. (9,678 kg.)	280 cwt. (14,225 kg.)
CD.21 XLW Haulage	17 6 (5 334m.)	8 0 (2 438m.)	10-00—20 14 ply	86 cwt. (4,369 kg.)	5½ cwt. (279 kg.)	188½ cwt. (9,576 kg.)	280 cwt. (14,225 kg.)
CD.21 T Tipper	10 0 (3 048m.)	7 6 (2 286m.)	10-00—20 14 ply	78 cwt. (3,963 kg.)	5½ cwt. (279 kg.)	196½ cwt. (9,983 kg.)	280 cwt. (14,225 kg.)
CD.21 TW Tipper	10 0 (3 048m.)	8 0 (2 438m.)	10-00—20 14 ply	80 cwt. (4,064 kg.)	5½ cwt. (279 kg.)	194½ cwt. (9,881 kg.)	280 cwt. (14,225 kg.)
CD.21 TR Tractor	8 0 (2 438m.)	7 6 (2 286m.)	8-25—20 12 ply	75 cwt. (3,810 kg.)	4½ cwt. (216 kg.)	278½ cwt. (14,161 kg.)	358 cwt. (18,187 kg.)

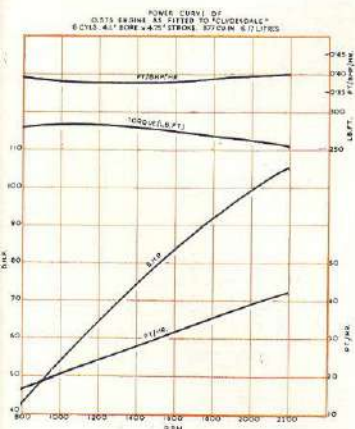
*Equipment includes water, full tank of fuel, spare wheel and tools.

TH 9 TONS PAYLOAD



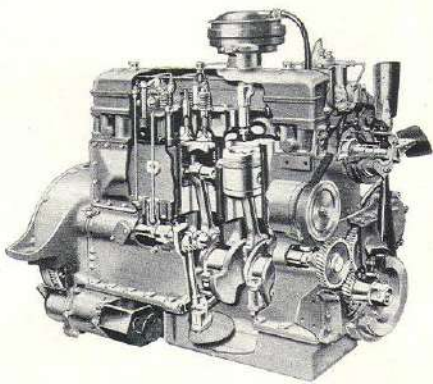
STURDY LONG-LIFE CHASSIS FOR TOUGH WORK

A simple straightforward quality-built chassis, the new Clydesdale is a thoroughbred in every sense of the word. The result of extensive research and testing under the most arduous conditions, it embodies many new and improved mechanical refinements designed to give still longer periods of trouble-free service between overhauls and reduce operating costs to a minimum.



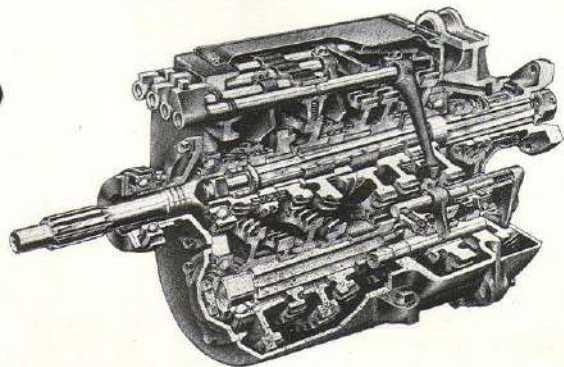
POWERFUL 377 CU. IN. DIESEL

The new 6-cylinder high speed direct-injection diesel develops 105 B.H.P. with a maximum torque of 285 lb. ft., at 1,100 r.p.m. Fuel consumption throughout the entire speed range is remarkably low, while the layout of the engine lends itself to speedy maintenance at minor and major overhauls.



5 OR 6-SPEED GEARBOX

The 5-speed constant mesh gear box is a real heavy-duty unit, built to withstand the most rigorous treatment. Silence in operation is ensured by use of helical gears. To improve fuel economy or to obtain a higher road speed, a helical-toothed overdrive 6th speed with a .76 to 1 ratio, can be incorporated at an extra charge. A 50 h.p. low or high speed power take-off can be fitted on side of box.





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 radiator grille panel is detachable and when radiator is removed, the engine can be easily withdrawn through the aperture. All the underside surfaces of cab and front wings are treated with weather-sealing.



EASY ACCESS LUXURY CAB FOR COMFORT, SAFETY AND DURABILITY

The cab is of entirely new modern design with every feature essential to the vehicle of today. Particular emphasis has been placed on ease of entrance, visibility and driver comfort. It is a pressed-steel welded assembly based on a rigid sub-frame of deep box section pressings, combining strength and durability with pleasing lines and styling.

Easy access to the cab is a great feature; one step from the kerb and your in.

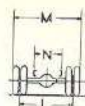
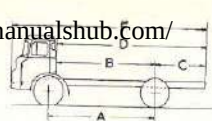
The comfortable driver's seat is adjustable vertically and longitudinally.

Provision is made for the installation of a fresh air heater with de-mister, radio, windscreen washers and flashing indicators.



DRIVER COMFORT

Readily accessible controls, which include organ pedal accelerator, cut driving effort to a minimum, thus reducing fatigue on long distance journeys. Instruments are grouped in an attractive detachable panel with concealed illumination, and mounted in easy-viewing position. Floor of cab has rubber mats and pedals and doors are draught sealed.



APPROXIMATE CHASSIS DIMENSIONS

Model	A	B	C	D	F	H	K	L	M	N	Frame Height (Laden)	Turning Circle
CD.21Y Haulage	ft. in. 12 0 (3 658m.)	ft. in. 11 3½ (3 448m.)	ft. in. 5 1½ (1 568m.)	ft. in. 16 5½ (5 017m.)	ft. in. 21 8 (6 604m.)	ft. in. 6 3½ (1 911m.)	ft. in. 7 5½ (2 273m.)	ft. in. 5 8½ (1 740m.)	ft. in. 7 5½ (2 280m.)	ft. in. 2 10 (0 864m.)	ft. in. 3 2½ (0 974m.)	ft. in. 45 0 (13 868m.)
CD.21YW Haulage	12 0 (3 658m.)	11 3½ (3 448m.)	5 1½ (1 568m.)	16 5½ (5 017m.)	21 8 (6 604m.)	6 8 (2 032m.)	7 11½ (2 426m.)	5 11 (1 803m.)	7 10½ (2 394m.)	2 10 (0 864m.)	3 2½ (0 974m.)	45 0 (13 868m.)
CD.21N Haulage	13 6 (4 115m.)	12 9½ (3 905m.)	5 7½ (1 721m.)	18 5½ (5 626m.)	23 8 (7 214m.)	6 3½ (1 911m.)	7 5½ (2 273m.)	5 8½ (1 740m.)	7 5½ (2 280m.)	2 10 (0 864m.)	3 2½ (0 974m.)	51 0 (15 545m.)
CD.21NW Haulage	13 6 (4 115m.)	12 9½ (3 905m.)	5 7½ (1 721m.)	18 5½ (5 626m.)	23 8 (7 214m.)	6 8 (2 032m.)	7 11½ (2 426m.)	5 11 (1 803m.)	7 10½ (2 394m.)	2 10 (0 864m.)	3 2½ (0 974m.)	51 0 (15 545m.)
CD.21L Haulage	15 0 (4 752m.)	14 3½ (4 362m.)	7 1½ (2 178m.)	21 5½ (6 541m.)	26 8 (8 128m.)	6 3½ (1 911m.)	7 5½ (2 273m.)	5 8½ (1 740m.)	7 5½ (2 280m.)	2 10 (0 864m.)	3 2½ (0 974m.)	55 6 (16 916m.)
CD.21LW Haulage	15 0 (4 752m.)	14 3½ (4 362m.)	7 1½ (2 178m.)	21 5½ (6 541m.)	26 8 (8 128m.)	6 8 (2 032m.)	7 11½ (2 426m.)	5 11 (1 803m.)	7 10½ (2 394m.)	2 10 (0 864m.)	3 2½ (0 974m.)	55 6 (16 916m.)
CD.21XL Haulage	17 6 (5 334m.)	16 9½ (5 124m.)	7 4½ (2 254m.)	24 2½ (7 379m.)	29 5 (8 966m.)	6 3½ (1 911m.)	7 5½ (2 273m.)	5 8½ (1 740m.)	7 5½ (2 280m.)	2 10 (0 864m.)	3 2½ (0 974m.)	63 6 (19 355m.)
CD.21XLW Haulage	17 6 (5 334m.)	16 9½ (5 124m.)	7 4½ (2 254m.)	24 2½ (7 379m.)	29 5 (8 966m.)	6 8 (2 032m.)	7 11½ (2 426m.)	5 11 (1 803m.)	7 10½ (2 394m.)	2 10 (0 864m.)	3 2½ (0 974m.)	63 6 (19 355m.)
CD.21T Tipper	10 0 (3 048m.)	9 3½ (2 838m.)	3 4 (1 016m.)	12 7½ (3 854m.)	17 10½ (5 442m.)	6 3½ (1 911m.)	7 5½ (2 273m.)	5 8½ (1 740m.)	7 5½ (2 280m.)	2 10 (0 864m.)	3 2½ (0 974m.)	39 0 (11 887m.)
CD.21TW Tipper	10 0 (3 048m.)	9 3½ (2 838m.)	3 4 (1 016m.)	12 7½ (3 854m.)	17 10½ (5 442m.)	6 8 (2 032m.)	7 11½ (2 426m.)	5 11 (1 803m.)	7 10½ (2 394m.)	2 10 (0 864m.)	3 2½ (0 974m.)	39 0 (11 887m.)
CD.21TR Tractor	8 0 (2 438m.)	7 3½ (2 229m.)	3 3 (0 991m.)	10 6½ (3 219m.)	15 9½ (4 807m.)	6 3½ (1 911m.)	7 5½ (2 273m.)	5 8½ (1 740m.)	7 4½ (2 238m.)	2 10 (0 864m.)	2 9½ (0 854m.)	33 0 (10 058m.)

STANDARD BODY DIMENSIONS

Type of Body	Wheelbase	Capacity of Body	Inside Length of Platform	Inside Width of Platform	Height of Sill or Side	Floor Height Unladen	Overall Height Unladen	Overall Length of Vehicle
Lorry with Cab ...	ft. in. 12 0 (3 658 m.)	—	ft. in. 16 0 (4 877 m.)	ft. in. 7 0 (2 134 m.)	ft. in. 3 (0 076 m.)	ft. in. 4 1½ (1 251 m.)	ft. in. 8 6½ (2 597 m.)	ft. in. 21 10½ (6 667 m.)
Lorry with Cab ...	12 0 (3 658 m.)	—	16 0 (4 877 m.)	7 6 (2 286 m.)	3 (0 076 m.)	4 1½ (1 251 m.)	8 6½ (2 597 m.)	21 10½ (6 667 m.)
Lorry with Cab ...	13 6 (4 115 m.)	—	18 0 (5 486 m.)	7 0 (2 134 m.)	3 (0 076 m.)	4 1½ (1 251 m.)	8 6½ (2 597 m.)	23 10½ (7 277 m.)
Lorry with Cab ...	13 6 (4 115 m.)	—	18 0 (5 486 m.)	7 6 (2 286 m.)	3 (0 076 m.)	4 1½ (1 251 m.)	8 6½ (2 597 m.)	23 10½ (7 277 m.)
Lorry with Cab ...	15 0 (4 572 m.)	—	21 0 (6 401 m.)	7 0 (2 134 m.)	3 (0 076 m.)	4 1½ (1 251 m.)	8 6½ (2 597 m.)	26 10½ (8 191 m.)
Lorry with Cab ...	15 0 (4 572 m.)	—	21 0 (6 401 m.)	7 6 (2 286 m.)	3 (0 076 m.)	4 1½ (1 251 m.)	8 6½ (2 597 m.)	26 10½ (8 191 m.)
Lorry with Cab ...	17 6 (5 334 m.)	—	23 9 (7 239 m.)	7 0 (2 134 m.)	3 (0 076 m.)	4 1½ (1 251 m.)	8 6½ (2 597 m.)	29 7½ (9 030 m.)
Lorry with Cab ...	17 6 (5 334 m.)	—	23 9 (7 239 m.)	7 6 (2 286 m.)	3 (0 076 m.)	4 1½ (1 251 m.)	8 6½ (2 597 m.)	29 7½ (9 030 m.)
Tipper ...	10 0 (3 048 m.)	6½/7 cu. yd. (4 97/5 35 cu. m.)	13 0 (3 962 m.)	6 11 (2 108 m.)	2 0 (0 610 m.)	4 4½ (1 327 m.)	8 6½ (2 597 m.)	18 10½ (5 747 m.)
Tipper ...	10 0 (3 048 m.)	6½/7 cu. yd. (4 97/5 35 cu. m.)	13 0 (3 962 m.)	7 5 (2 261 m.)	1 10 (0 559 m.)	4 4½ (1 327 m.)	8 6½ (2 597 m.)	18 10½ (5 747 m.)
Tractor† ...	8 0 (2 438 m.)	—	—	—	—	—	—	—

† Particulars of trailer attachments are not given owing to wide variations in customers' requirements.

SPECIFICATION OF NEW CLYDESDALE

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The new "Clydesdale" range of models is designed to operate at a normal gross laden weight of 280 cwt. (14,225 kg.).

Economical Diesel Engine.—6-cylinder direct-injection diesel engine, Leyland type 0.375; bore and stroke 4.1 in. by 4.75 in. (104 mm. by 120.7 mm.); capacity 377 cu. in. (6.17 litres); 105 b.h.p. at 2,200 r.p.m.; maximum torque 285 lb. ft. (39.42 kg.m.) at 1,100 r.p.m.; compression ratio 16 to 1; oil sump capacity 20 pints.

Cylinder Block and Crankcase.—Cast in one, adequately flanged and ribbed for rigidity; renewable pre-finished dry type cylinder liners; nitride hardened crankshaft with seven journals; 3.1 in. (78.74 mm.) diameter, indium-coated lead-bronze strip bearings; one-piece detachable cylinder head with "Valmet" exhaust valve seats; "I" section polished alloy-steel connecting rods drilled to supply intermittent oil spray to thrust side of cylinder bore; indium-coated lead-bronze steel-backed strip bearings for big ends 2.4 in. (60.9 mm.) diameter; toroidal-cavity low-expansion aluminium-alloy pistons with fully floating gudgeon pins 1.3 in. (33 mm.) diameter offset to give quieter running; three compression rings (top ring chromium plated), two oil-control scraper rings; Stellite faced exhaust valves; de-compressor gear operating on exhaust valves; helical toothed timing gears; gear-type lubricating pump driven by spiral gears from camshaft, with full pressure supply to main, big-end, and camshaft bearings; intermittent oil feed to rocker gear; full-flow external filter engine, clutch and gearbox 4-point flexibly mounted in frame.

Injection Equipment.—Leyland 4-spray injectors; C.A.V. fuel injection pump, fed by a diaphragm lift pump from fuel tank; engine governor operated by vacuum through large sensitive diaphragm; efficient oil-bath air cleaner mounted direct on inlet manifold.

Thermostatic Cooling.—Vigorous water circulation through water jackets and radiator by self-adjusting pump; thermostatically controlled circulation; 18½ in. (476 mm.) diameter 6-bladed fan. Capacity of system 4½ gallons (20 litres).

Engine Auxiliaries.—Dynamo swung mounted on the front left-hand side of engine and belt driven; starter motor flange mounted on flywheel housing at right-hand side of engine; 2-cylinder compressor fitted on left-hand side of engine, gear driven on common drive to fuel injection pump.

Hydraulic Clutch.—Borg & Beck rigid type single dry-plate 14 in. (356 mm.) diameter; 182 sq. in. (1174 sq. cm.) frictional area; hydraulically operated by long-stroke slave cylinder providing automatic adjustment for wear.

Heavy-duty 5-Speed Gearbox.—Incorporates large diameter shafts carrying wide-faced gears of case-hardened nickel-chrome steel; helical gears on all except 1st and 2nd speeds; all forward gears in constant mesh; engagement by dog clutches; mainshaft gear bearings lubricated by oil from reservoir in hollow mainshaft under centrifugal force through radial holes. Gear ratios—top, 1 to 1; 4th, 1.605 to 1; 3rd, 2.655 to 1; 2nd, 4.308 to 1; 1st, 6.988 to 1; reverse, 6.343 to 1.

Overdrive 6th Speed.—To improve fuel economy or to obtain a higher road speed, a helical-toothed 6th speed with a ratio of .75 to 1 is available as an alternative at an extra charge.

Easy Speed Change.—Ball speed change lever centrally mounted at front of gearbox.

Needle Roller Universals.—Open divided propeller shafts with Series 1600 Hardy Spicer needle roller universal joints.

Front Axle.—Alloy-steel "I" section forging; pivot pins mounted in plain bushes; thrust taken on a flat phosphor-bronze washer.

Rear Axle with Hub Reduction Gears.—Spiral bevel axle with hub reduction gears; the two combined giving a normal overall ratio for the vehicle; reduction ratio at epicyclic gears in hub is 4 to 1; the spiral bevel input gears give a wide range of ratios by change of bevels. The standard overall ratio is 7.428 to 1. Four-pin differential; common lubrication of differential and hubs; oil capacity 27 pints (15.3 litres).

Long Easy-Riding Springs.—Normal semi-elliptic springs of silico-manganese steel; centre distance, front 54 in. (1,372 mm.); rear, 54 in. (1,372 mm.); width of plates, front 3 in. (76.2 mm.); rear, 3 in. (88.9 mm.).

Powerful Brakes.—Air pressure brakes of the cam-operated internal-expanding type. Air pressure is supplied to the system by a 2-cylinder compressor mounted on the engine. The footbrake operates on all wheels, the pedal being coupled direct to the air control valve, which in turn is connected to a large air pressure reservoir. The diaphragm-type brake chambers which operate the front brakes are mounted over the kingpins, whilst the chambers for the rear brakes are mounted on the axle casing. An unloader valve is fitted to the chassis. The system incorporates adjusters, so that fine adjustment can be made to each individual brake quickly and simply.

A multi-pull ratchet type handbrake operates the shoes on the rear wheels by mechanical linkage. Cast iron drums, 15½ in. (39.37 cm.) diameter; front liners 4½ in. (11.43 cm.) wide; rear liners, 7 in. (17.78 cm.) wide. Total braking area, footbrake 624 sq. in. (4,026 sq. cm.); hand brake 380 sq. in. (2,452 sq. cm.).

Steering.—Marles cam-and-double-roller steering gear; box mounted on frame side members; steering ratio, 28.5 to 1; 19½ in. (501 mm.) diameter steering wheel; 5½ turns from lock to lock. Turning circles as tabulated overleaf.

Robust Pressed-steel Frame.—Frame side members of high tensile steel pressed-channel section; 9½ in. × 2½ in. × ⅝ in. (23.5 cm. × 6.35 cm. × 7.94 mm.); well braced with stay tubes and pressed-steel cross members bolted in position; front towing plate. Tipper model generously fitted-plated to reduce frame stresses.

Fuel Tank.—Cylindrical tank, with fuel gauge, outrigger from main frame member; capacity 37 gallons (168 litres) for all except CD.21TR which carries 25 gallons (114 litres.)

Wheels and Tyres.—Detachable steel disc wheels with ten-stud fixings; hubs mounted on taper roller bearings; 10.00—20 (14-ply) pneumatic tyres, single front, twins rear. On 8 ft. wide chassis only, 11.00—20 (12-ply) tyres can be fitted at an extra charge.

24-volt Electrical System.—24-volt lighting and starting; constant voltage system; dynamo output 280 watts; 5 in. (127 mm.) diameter axial starter; batteries 67 amp. hr. capacity; voltage regulator and fuse and junction box; electric horn, headlamps, sidelamps, stop and tail lights.

Panoramic All-steel Cab.—Modern styling full forward control cab of pressed-steel construction; remarkably easy entrance; three point rubber mounted; front visibility through large curved glass windscreen, rear through well placed rear lights (for panel vehicles); neat removable engine cover; illuminated panel on face carrying ammeter, oil pressure gauge, air pressure gauge, speedometer with mileage recorder and temperature gauge; horn button and dipper switch mounted on steering column. Doors hinged at front; winding windows in doors; swivelling "D" windows; comfortable adjustable seats for driver and mate; organ pedal accelerator; rubber floor covering; draught sealed pedals and doors; two rear view mirrors; two electric windscreen wipers; provision for built-in heater and de-mister; built-in head and side lamps; detachable radiator grille.

Chassis Equipment and Finish.—The chassis and cab are finished in primer. The underside surfaces of cab and front wings are given a weather-sealing treatment. The chassis is supplied complete with front and rear number plates and driver's toolkit.

Optional Equipment.—Included amongst the optional equipment that can be supplied are the following—Spare wheel carrier. Spare wheel, tyre and tube. Overdrive 6th speed. Power take-off, light low or high speed (50 h.p. at 1800 r.p.m.). Front bumper. Hydraulic telescopic dampers on front axle. Cab heater and de-mister. Fog lamp. Flashing indicators. Radio. Windscreen washers. Garage toolkit. 11.00—20 (12-ply) tyres on 8 ft. 0 in. wide chassis only.

Note.—Albion Motors Ltd. retain the right to revise this specification without notice.



**ALBION MOTORS LTD.,
SCOTSTOUN GLASGOW, W.4**

LONDON OFFICE: HANOVER HOUSE, HANOVER SQUARE, LONDON W.1