

# SCANIA

SPECIFICATION

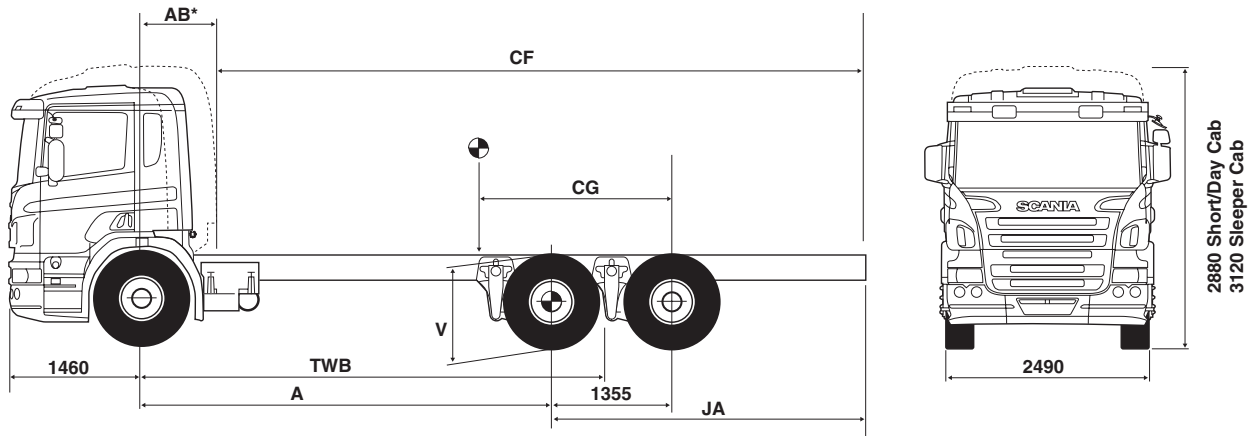
**P-series**

## P 230 DB6x2\*4MNA

27500Kg GVW

THREE AXLE RIGID (REAR STEER)

# P



AB (centreline of front axle to start of bodywork) Short – 450 Day – 610 Sleeper – 875

\* Increases by 15mm with air deflectors

### DIMENSIONS (mm)

		3900	4100	4300	4500	4700	4900	5100	5300	5500	5700	5900	6100
<b>A</b>		3900	4100	4300	4500	4700	4900	5100	5300	5500	5700	5900	6100
<b>TWB</b>		4438	4638	4838	5038	5238	5438	5638	5838	6038	6238	6438	6638
<b>BLR</b>	Day cab	6541	6890	7244	7594	7947	8303	8655	8920‡	9095‡	9270‡	9445‡	9616‡
	(feet)	(21.5)	(22.6)	(23.8)	(24.9)	(26.0)	(27.2)	(28.4)	(29.3)	(29.8)	(30.4)	(31.0)	(31.6)
	Sleeper	6049	6400	6755	7109	7463	7820	8176	8533	8830‡	9005‡	9180‡	9351
	(feet)	(19.9)	(21.0)	(22.2)	(23.3)	(24.5)	(25.7)	(26.8)	(28.0)	(29.0)	(29.5)	(30.1)	(30.7)
<b>CF</b>	Day cab	6540	6890	7240	7590	7940	8300	8650	8920	9090	9270	9440	9610
	Sleeper	6045	6395	6755	7105	7455	7815	8175	8525	8825	9005	9175	9345
<b>JA</b>	Day cab	3250	3400	3550	3700	3850	4010	4160	4230	4200	4180	4150	4120
	Sleeper	3020	3170	3330	3480	3630	3790	3950	4100	4200	4180	4150	4120
<b>JA Max</b>		4000	4200	4200	4400	4600	4800	5000	5200	5200	5000	4800	4600
<b>CG Max</b>	Day cab	1615	1652	1686	1722	1756	1790	1824	1859	1891	1925	1957	1948
	Sleeper	1597	1633	1666	1701	1735	1768	1801	1834	1866	1899	1930	1940
<b>CG Min</b>	Day cab	1376	1401	1424	1448	1472	1495	1518	1540	1562	1584	1605	1597
	Sleeper	1356	1381	1403	1426	1449	1471	1493	1515	1535	1556	1576	1567

‡ Limited by legal rear overhang – 8500kg legal front axle recommended.

V unladen	V laden	Chassis Height
1000 mm	970 mm	Normal (N)
878 mm	854 mm	Low (L) <sup>1</sup>

BLR = Max. bodylength to suit weight distribution. CG dimension for body and payload calculated for standard model at standard GB plated weights. V dimension measured to top of frame at rear bogie centreline. Rear overhang (JA) can be specified in 10 mm steps up to maximum – check legality.

<sup>1</sup>Dimensions assume '60 series' tyre fitment.

### PLATED WEIGHTS – AWR

		Front Axle	Drive Axle	Trailing Axle	GVW	GTW <sup>¶</sup>
Design						
Gross	Kg	8500†	11500	7500	27500	31000
Legal						
Max in GB	Kg	8000	11500	7500	26000	29500

<sup>¶</sup>GTW 40000kg when fitted with trailer brakes and either '270' or '310' engine. GR905 gearbox recommended as minimum.

† Front axle capacity up to a maximum of 9000 kg available as option.

Plated weights dependent on statutory tyre limitations.

### CHASSIS/CAB WEIGHTS

(Tolerance +/- 2.5%)

Axle distance	Front	Rear Bogie	Total (kg)
3900	4481	2791	7272
4100	4476	2806	7282
4300	4486	2836	7322
4500	4486	2851	7337
4700	4491	2861	7352
4900	4496	2866	7362
5100	4501	2876	7377
5300	4511	2911	7422
5500	4521	2921	7442
5700	4531	2941	7472
5900	4541	2956	7497
6100	4671	3196	7867

Chassis cab weight includes 20 litres of fuel, oil and water. Driver not included. See overleaf for option weights.

## P 230 DB6x2\*4MNA

SL5450837  
April 06

## ENGINE (EURO 4)

Scania '9 litre' vertical five cylinder in-line turbocharged intercooled direct injection diesel with unit injectors.

**'230'**

<b>Type:</b>	<b>DC9-16</b>
<b>Swept Volume:</b>	8.9 litres
<b>Bore:</b>	127 mm
<b>Stroke:</b>	140 mm
<b>Compression Ratio:</b>	17:1
<b>*Max. Power:</b>	169kW (230 h.p.) at 1800 rev/min
<b>*Max. Torque:</b>	1050 Nm (774 lbf.ft) between 1100 and 1500 rev/min
<b>Engine Management System:</b>	EMS – incorporating Cruise Control and speed limiter
<b>Emission Control:</b>	Scania EGR
<b>Cooling:</b>	Water cooled with rubber mounted 2 row radiator and electronically regulated fan
<b>Coolant Capacity:</b>	42 litres
<b>Oil Capacity:</b>	27 litres
<b>Air Cleaner:</b>	Dry replaceable paper element

### Options:-

**(1) Details as above except for the following:-**

**'270'**

<b>Type:</b>	<b>DC9-17</b>
<b>*Max. Power:</b>	199kW (270 h.p.) at 1800 rev/min
<b>*Max. Torque:</b>	1250 Nm (922 lbf.ft) between 1100 and 1450 rev/min

**(2) Details as above except for the following:-**

**'310'**

<b>Type:</b>	<b>DC9-18</b>
<b>*Max. Power:</b>	228kW (310 h.p.) at 1800 rev/min
<b>*Max. Torque:</b>	1550 Nm (1143 lbf.ft) between 1100 and 1350 rev/min

**(3) Provision for ED120 engine driven P.T.O.**

\*With fan at max. slip

## CLUTCH

<b>Type:</b>	Single dry plate
<b>Operation:</b>	Air assisted with clutch wear protection

## GEARBOX

<b>Type:</b>	Scania GR875 eight speed synchromesh (four speed main fitted with two speed planetary range unit)
<b>Oil Capacity:</b>	11.1 litres

## GEAR RATIOS

### Low Range

1st	9.17:1
2nd	6.26:1
3rd	4.65:1
4th	3.75:1

### High Range

5th	2.45:1
6th	1.67:1
7th	1.24:1
8th	1.00:1

Reverse 8.21:1

### Options:-

**(1) Type:** Scania GR905 - eight speed synchromesh (four speed main fitted with two speed planetary range unit) plus one crawler gear.

**(2) Type:** Scania GRS895 twelve speed synchromesh (three speed main fitted with two speed planetary range unit plus splitter).

**(3) Opticruise:** Gearchange management system – all engines with GR875 – '270' and '310' only with GRS895.

**(4) Type:** Automatic 6 speed electronically controlled.

## REAR AXLE

<b>Type:</b>	<b>Drive:</b> Scania ADA1300
	<b>Trailing:</b> Scania ARA900
<b>Capacity:</b>	Combined 19000 Kg

Pressed steel housing with magnetic oil drain plug.

## REAR AXLE GEAR

<b>Type:</b>	Scania R660
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Single reduction hypoid. Crown wheel and pinion matched during manufacture. Pneumatically operated differential lock.

## FRONT AXLE

<b>Type:</b>	Scania AM950 I section rigid beam Scania AMA860 with air suspension
<b>Capacity:</b>	AM950 - 9000Kg AMA860 – 8000Kg

## STEERING

<b>Type:</b>	Recirculating ball. Hydraulically assisted power steering to first and last axle.				
<b>Steering wheel:</b>	Diameter 450mm. Lock to lock 4.9 turns				
<b>Turning circle:</b>	Kerb to kerb				
3.9m A/D	14.2m	4.1m A/D	14.9m	4.3m A/D	15.6m
4.5m A/D	16.4m	4.7m A/D	17.1m	4.9m A/D	17.8m
5.1m A/D	18.5m	5.3m A/D	19.2m	5.5m A/D	19.9m
5.7m A/D	20.6m	5.9m A/D	21.3m	6.1m A/D	22.1m

## SUSPENSION

<b>Type Front:</b>	Semi-elliptic parabolic springs with swinging shackles and threaded shackle pins.
<b>Type Rear:</b>	Quarter elliptic with air bellows (A) on both axles. Pneumatic tag-axle hoist. Chassis height may be raised or lowered to assist loading. Double acting telescopic shock absorbers are fitted to all axles.

**Options:- (1) Front anti-roll bar**

## SPRING SIZE

	<b>Front</b>
<b>Length:</b>	1820mm
<b>No. of leaves</b>	3 x 29mm
<b>Design Capacity</b>	8500Kg

### Options:-

- (1) Air suspension on front axle – design capacity 8000 kg.**  
**(2) 4 x 28mm leaves – design capacity 9000 kg.**

## WHEELS & TYRES

<b>Front:</b>	9.00 x 22.5 ten stud spigot mounted disc wheels fitted with 315/80R22.5 radial tubeless tyres.
<b>Drive:</b>	9.00 ten stud spigot mounted disc wheels fitted with 315/80R22.5 radial tubeless tyres.
<b>Rear:</b>	9.00 ten stud spigot mounted disc wheels fitted with 315/80R22.5 radial tubeless tyres.

### Options:-

- (1) 11.75 x 22.5 wheels with 385/65R22.5 or 385/55R22.5 tyres - steered axles only.**  
**(2) Aluminium wheels - machined or polished surface finish.**  
**(3) Wheel embellishers - steered axles only.**

## FRAME

<b>Type:</b>	F950-50 – 3.9 to 5.9m A/D F958-50 for 6.1m A/D and all 'H' duty class.
	Flat top constant depth 'U' channel with riveted crossmembers
<b>Sidemember Dimensions:</b>	F950 – 270 x 90 x 9.5mm F958 – 270 x 90 x 9.5mm External member – 247 x 78 x 8mm Internal member
	Pre-drilled for bodywork mounting brackets.
	Width over parallel section of frame = 770mm
<b>Bumper:</b>	Aerodynamic incorporating FUP
<b>Options:- (1) Steel bumper – increases front overhang to 1510mm.</b>	
<b>(2) Centre tow pin – steel bumper only</b>	

## BRAKE SYSTEM

**Type:** Ventilated disc brakes on all axles. Dual circuit, full air, EC brake system incorporating Category 1 ABS and Traction Control. Electronic signalling with pneumatic back-up. Pad wear indicator. Brake pipes manufactured from either rust protected steel or high impact synthetics

**Service Circuit:** Actuates all truck brakes

**Secondary Circuit:** First position of park brake lever actuates spring brakes.

**Parking Brake:** Actuates spring chambers on drive and last axles.

**Exhaust Brake:** Air actuated operated by brake pedal

**Brake Antifreeze Protection:** Air dryer

**Brake Wear Adjusters:** Automatic

**Options:-**  
**(1)** 2 Line EC trailer brake pipes to rear section of chassis.  
**(2)** Scania Hydraulic Retarder.

## BRAKE DIMENSIONS

**Pad lining area:** 2 x 190cm<sup>2</sup> on all axles

**Swept area of each disc:** 2 x 940cm<sup>2</sup>

## ELECTRICAL SYSTEM

**Type:** 24V neg (-ve) earth      **Alternator:** 100A

**Batteries:** Twin 140Ah

Rear H.I. lamps, Reversing lights, Battery connection - 200A

**Options:-**  
**(1)** 180Ah batteries, **(2)** 225Ah batteries,  
**(3)** Bodywork electrical preparation – see separate document.

## FUEL TANK

1 x 300 litre aluminium RHS

**Options:-** (Minimum axle distance and suspension type in brackets)

	RH Side	LH Side	Aluminium - W	RH Side	LH Side
<b>Steel - G</b>	150	150	200	200	200
	200		300	300	
	300	300	350	350	350
	450	450	400	400	400
			500	500	
			600	600	
			700	700	4100

Tank sizes can be supplied in LH + RH combinations of the above but steel and aluminium cannot be mixed. Sides viewed from rear.

## GENERAL EQUIPMENT

Front tow pin

**Options:-**

- (1)** Vertical exhaust outlet.  
**(2)** ADR to EXIII/EXIII, FL, OX or AT.

## INSTRUMENTS & CONTROLS

Two man, 1 day, EC digital tachograph, rev-counter, gauges for air pressure (2), coolant temperature and fuel. Six speed wipers with four jet integral screen wash. Halogen headlamps adjustable from cab for correction of beam height. Warning lights for all major systems grouped within easy vision.

Instrument panel of modular design with switches and controls grouped according to usage. All instruments are back-lit and non-reflective. Impact absorbing, adjustable steering wheel with column lock.

## CAB

**CP16** Day Cab

Please see separate specification – 'Scania Cabs' for equipment levels.

**Options:-**

- (1)** CP19 Sleeper Cab  
**(2)** CP14

## P.T.O. OPTIONS Check gearbox availability

	G670	GR875/GRS895	GR905/GRS905	GRS0905
<b>EG550CC/560:</b>	6	0.69		
<b>EG551CC/561:</b>	6	0.54		
<b>EG650CC/660:</b>	5		1.00/1.24H	
<b>EG651CC/661:</b>	5		1.28/1.58H	
<b>EG652CC/662:</b>	5			0.82/1.03H
<b>EG653CC/663:</b>	5			1.03/1.29H
<b>EG654CC/664:</b>	5	1.00/1.24H		
<b>EG655CC/665:</b>	5	1.28/1.58H		
<b>EK730CC/740:</b>	12	1.00	1.00	1.00

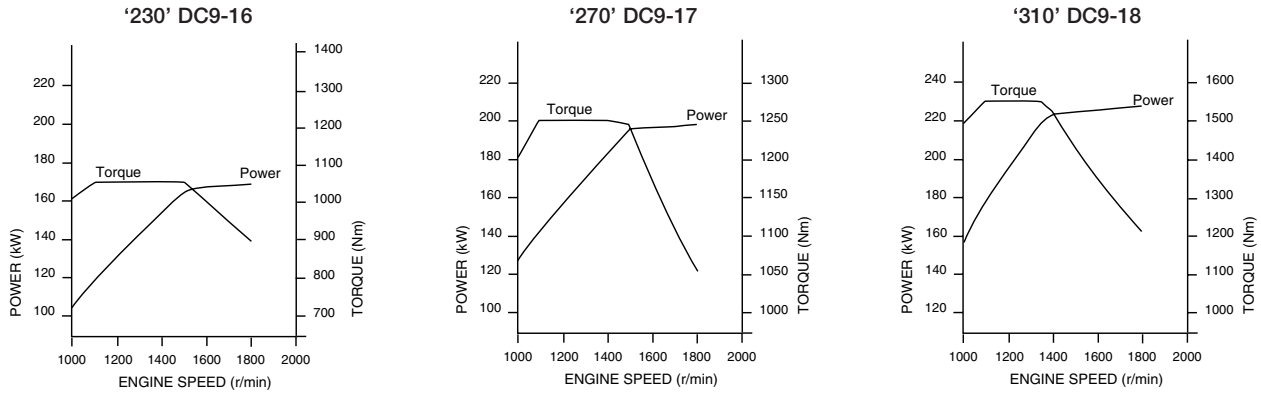
CC = close coupled    H = High on 'S' splitter gearboxes only

## WEIGHTS FOR OPTIONAL EQUIPMENT IN KILOGRAMS (Front – Rear – Total)

Axle Distance	39	41	43	45	47	49	51	53	55	57	59	61
GR905 Gearbox	+34 +9 +43	+34 +9 +43	+34 +9 +43	+35 +8 +43	+35 +8 +43	+36 +7 +43	+36 +7 +43	+36 +7 +43	+36 +7 +43	+37 +6 +43	+37 +6 +43	+37 +6 +43
GRS895	+2 0 +2	+2 0 +2	+2 0 +2	+2 0 +2	+2 0 +2	+2 0 +2	+2 0 +2	+2 0 +2	+2 0 +2	+2 0 +2	+2 0 +2	+2 0 +2
Front anti-roll bar	+34 -1 +33	+34 -1 +33	+34 -1 +33	+34 -1 +33	+34 -1 +33	+34 -1 +33	+34 -1 +33	+34 -1 +33	+34 -1 +33	+34 -1 +33	+34 -1 +33	+34 -1 +33
Air suspension front	+40 +15 +55	+40 +15 +55	+40 +15 +55	+40 +15 +55	+40 +15 +55	+40 +15 +55	+40 +15 +55	+40 +15 +55	+40 +15 +55	+40 +15 +55	+40 +15 +55	+40 +15 +55
4x28mm t/springs	+28 0 +28	+28 0 +28	+28 0 +28	+28 0 +28	+28 0 +28	+28 0 +28	+28 0 +28	+28 0 +28	+28 0 +28	+28 0 +28	+28 0 +28	+28 0 +28
385/55 tyres/												
11.75 rims	+30 +30 +60	+30 +30 +60	+30 +30 +60	+30 +30 +60	+30 +30 +60	+30 +30 +60	+30 +30 +60	+30 +30 +60	+30 +30 +60	+30 +30 +60	+30 +30 +60	+30 +30 +60
385/65 tyres/												
11.75 rims	+38 +38 +76	+38 +38 +76	+38 +38 +76	+38 +38 +76	+38 +38 +76	+38 +38 +76	+38 +38 +76	+38 +38 +76	+38 +38 +76	+38 +38 +76	+38 +38 +76	+38 +38 +76
Aluminium Wheels												
9.00x22.5	-30 -90 -120	-30 -90 -120	-30 -90 -120	-30 -90 -120	-30 -90 -120	-30 -90 -120	-30 -90 -120	-30 -90 -120	-30 -90 -120	-30 -90 -120	-30 -90 -120	-30 -90 -120
11.75x22.5	-44 -44 -88	-44 -44 -88	-44 -44 -88	-44 -44 -88	-44 -44 -88	-44 -44 -88	-44 -44 -88	-44 -44 -88	-44 -44 -88	-44 -44 -88	-44 -44 -88	-44 -44 -88
F958-50 frame	+105 +190 +295	+105 +190 +295	+110 +195 +305	+110 +195 +305	+115 +195 +310	+120 +200 +320	+130 +200 +330	+130 +210 +340	+140 +210 +350	+140 +220 +360	+150 +220 +370	Std.
Steel bumper	+19 -2 +17	+19 -2 +17	+19 -2 +17	+19 -2 +17	+19 -2 +17	+19 -2 +17	+19 -2 +17	+19 -2 +17	+19 -2 +17	+19 -2 +17	+19 -2 +17	+19 -2 +17
FUP - steel bumper	+67 -13 +54	+67 -13 +54	+67 -13 +54	+67 -13 +54	+67 -13 +54	+67 -13 +54	+67 -13 +54	+67 -13 +54	+67 -13 +54	+67 -13 +54	+67 -13 +54	+67 -13 +54
Centre tow pin	+29 -5 +24	+29 -5 +24	+29 -5 +24	+29 -5 +24	+29 -5 +24	+29 -5 +24	+29 -5 +24	+29 -5 +24	+29 -5 +24	+29 -5 +24	+29 -5 +24	+29 -5 +24
Retarder	+66 +22 +88	+68 +20 +88	+71 +17 +88	+73 +15 +88	+76 +12 +88	+79 +9 +88	+80 +8 +88	+82 +6 +88	+83 +5 +88	+84 +4 +88	+85 +3 +88	+86 +2 +88
180 Ah batteries	+14 +3 +17	+14 +3 +17	+14 +3 +17	+14 +3 +17	+14 +3 +17	+14 +3 +17	+14 +3 +17	+14 +3 +17	+14 +3 +17	+14 +3 +17	+14 +3 +17	+14 +3 +17
225 Ah batteries	+46 +10 +56	+46 +10 +56	+46 +10 +56	+46 +10 +56	+46 +10 +56	+46 +10 +56	+46 +10 +56	+46 +10 +56	+46 +10 +56	+46 +10 +56	+46 +10 +56	+46 +10 +56
Std tank-full	+138 +86 +224	+142 +82 +224	+145 +79 +224	+149 +75 +224	+151 +73 +224	+154 +70 +224	+157 +67 +224	+159 +65 +224	+161 +63 +224	+163 +61 +224	+165 +59 +224	+167 +57 +224
*1x450L G	+71 +100 +171	+75 +96 +171	+79 +92 +171	+83 +88 +171	+86 +85 +171	+89 +82 +171	+92 +79 +171	+95 +76 +171	+97 +74 +171	+100 +71 +171	+102 +69 +171	+104 +67 +171
Vertical exh outlet	+30 +9 +39	+30 +9 +39	+30 +9 +39	+30 +9 +39	+30 +9 +39	+30 +9 +39	+30 +9 +39	+30 +9 +39	+30 +9 +39	+30 +9 +39	+30 +9 +39	+30 +9 +39
CP14 cab	-35 +2 -33	-35 +2 -33	-35 +2 -33	-35 +2 -33	-35 +2 -33	-35 +2 -33	-35 +2 -33	-35 +2 -33	-35 +2 -33	-35 +2 -33	-35 +2 -33	-35 +2 -33
CP19 sleeper cab	+91 -6 +85	+91 -6 +85	+91 -6 +85	+91 -6 +85	+91 -6 +85	+91 -6 +85	+91 -6 +85	+91 -6 +85	+91 -6 +85	+91 -6 +85	+91 -6 +85	+91 -6 +85
Air deflectors-CP14	+40 +2 +42	+40 +2 +42	+40 +2 +42	+40 +2 +42	+40 +2 +42	+40 +2 +42	+40 +2 +42	+40 +2 +42	+40 +2 +42	+40 +2 +42	+40 +2 +42	+40 +2 +42
-CP16	+39 +3 +42	+39 +3 +42	+39 +3 +42	+39 +3 +42	+39 +3 +42	+39 +3 +42	+39 +3 +42	+39 +3 +42	+39 +3 +42	+39 +3 +42	+39 +3 +42	+39 +3 +42
-CP19	+39 +3 +42	+39 +3 +42	+39 +3 +42	+39 +3 +42	+39 +3 +42	+39 +3 +42	+39 +3 +42	+39 +3 +42	+39 +3 +42	+39 +3 +42	+39 +3 +42	+39 +3 +42
EG Series PTOs	+15 +3 +18	+15 +3 +18	+15 +3 +18	+15 +3 +18	+15 +3 +18	+15 +3 +18	+15 +3 +18	+15 +3 +18	+15 +3 +18	+15 +3 +18	+15 +3 +18	+15 +3 +18
EK Series PTOs	+42 +5 +47	+42 +5 +47	+42 +5 +47	+42 +5 +47	+42 +5 +47	+42 +5 +47	+42 +5 +47	+42 +5 +47	+42 +5 +47	+42 +5 +47	+42 +5 +47	+42 +5 +47

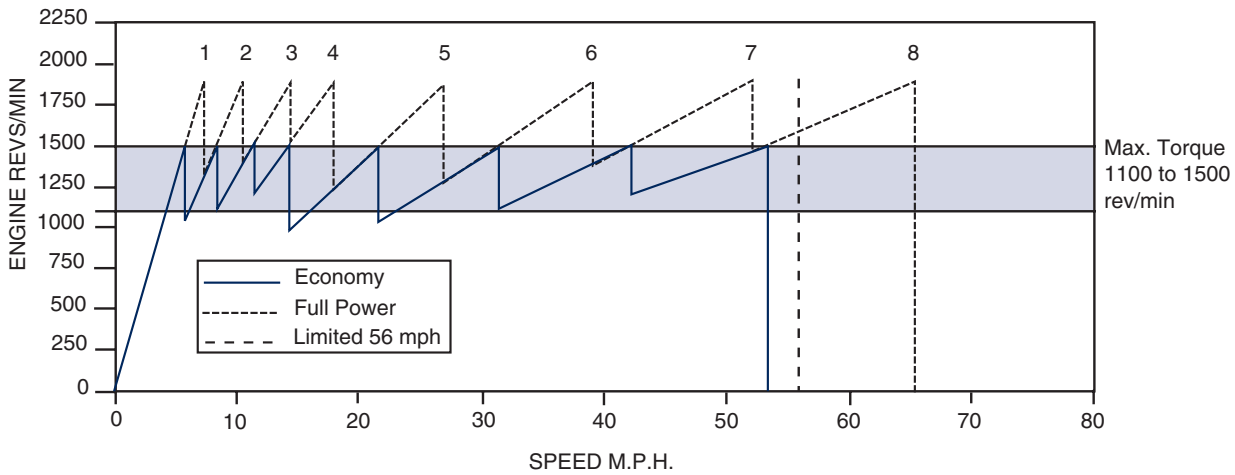
\* Additional to standard tank full of fuel.

### ENGINE PERFORMANCE



Net engine performance to 80/1269\*1999/99EC

### GEAR STEP DIAGRAM



### SPEED/GRADEABILITY

Gradeability may be limited by tyre adhesion.

Axle gear/ Ratio	Optimum Cruising Speed M.P.H.	Gradeability - steady climb - in percent				
		DC9-16 26T	DC9-17		DC9-18	
		26T	40T\$	26T	40T\$	
R 660 2.92*	56	19.4	23.6	28.7	30.0	>35
R 660 3.07	56	19.2	23.3	28.4	29.7	>35
R 660 3.42 std.	50-53	21.6	26.2	32.0	33.5	>35
R 660 3.80	45-48	24.2	29.4	>35	>35	>35
R 660 4.22	40-43	27.1	33.1	>35	>35	>35
R 660 4.88	35-38	31.8	>35	>35	>35	>35

\$40T calculations shown with GR905 gearbox. \*2.92 only available with low profile tyres – calculations based on 315/70R22.5 rear tyres.

Calculations assume standard specifications. Performance achieved in operation will depend on conditions, bodywork, gear ratios and tyre specification.

**The specifications contained in this publication are intended as a general guide, and not as representations as to the product described, nor as binding in detail.**