

# SCANIA

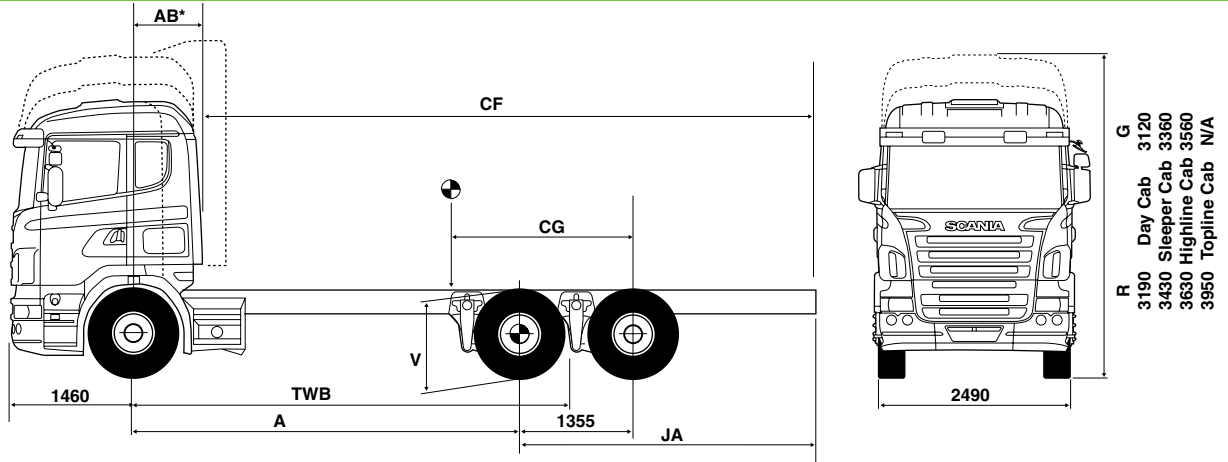
SPECIFICATION

P-, G- and R-series

## R/G 420 LB6x2\*4MNA

27500Kg GVW/60000Kg GTW

THREE AXLE RIGID/DRAWBAR  
(REAR STEER)



AB (centreline of front axle to start of bodywork) 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	6621	6969	7327	7681	8038	8396	8743	8920	9096‡	9271‡	9445‡	9617‡
	(feet)	(21.7)	(22.9)	(24.0)	(25.2)	(26.4)	(27.5)	(28.6)	(29.2)	(29.8)	(30.4)	(30.9)	(31.5)
	Sleeper	6156	6482	6843	7200	7561	7922	8284	8640	8816‡	8991‡	9165‡	9337‡
	(feet)	(20.2)	(21.3)	(22.5)	(23.6)	(24.8)	(26.0)	(27.2)	(28.3)	(28.9)	(29.5)	(30.0)	(30.6)
<b>CF</b>	Day cab	6620	6960	7320	7680	8030	8390	8740	8920	9090	9270	9440	9610
	Sleeper	6155	6495	6840	7200	7560	7920	8280	8640	8810	8990	9160	9330
<b>JA</b>	Day cab	3330	3470	3630	3790	3940	4100	4250	4230	4200	4180	4150	4120
	Sleeper	3130	3270	3430	3590	3750	3910	4070	4230	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	1580	1616	1649	1683	1716	1748	1781	1814	1845	1876	1908	1893
	Sleeper	1549	1583	1614	1646	1678	1709	1740	1771	1801	1831	1860	1843
<b>CG Min</b>	Day cab	1335	1341	1382	1405	1426	1447	1469	1489	1509	1529	1548	1513
	Sleeper	1303	1385	1366	1345	1385	1405	1424	1443	1461	1479	1497	1459

‡ Limited by overall length or rear swing-out regulations – 8500kg legal front axle recommended.

V unladen	V laden	Chassis Height
1012 mm	985 mm	Normal (N)
922 mm	897 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 385/55R22.5 front and 315/70R22.5 rear tyre fitment.

### PLATED WEIGHTS – AWR

		Front Axle	Drive Axle	Trailing Axle	GVW	GTW
Design						
Gross	Kg	8500†	11500	7500	27500	60000
Legal						
Max in GB	Kg	8000	11500	7500	26000	44000

† 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	4841	2953	7794
4100	4836	2968	7804
4300	4846	2998	7844
4500	4846	3013	7859
4700	4851	3023	7874
4900	4856	3028	7884
5100	4861	3038	7899
5300	4871	3073	7944
5500	4881	3083	7964
5700	4891	3103	7994
5900	4901	3118	8019
6100	5099	3359	8458

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

R/G 420 LB6x2\*4MNA

SL5450857  
January 08

## ENGINE (EURO 4)

Scania '12 litre' vertical six cylinder in-line turbocharged intercooled direct injection diesel with Turbo-compound and hydraulic unit injectors (H.P.I.).  
**'420'**

<b>Type:</b>	<b>DT 12-12</b>
<b>Swept Volume:</b>	11.7 litres
<b>Bore:</b>	127 mm
<b>Stroke:</b>	154 mm
<b>Compression Ratio:</b>	17:1
<b>*Max. Power:</b>	309kW (420 h.p.) at 1900 rev/min
<b>*Max. Torque:</b>	2100 Nm (1549 lbf.ft) between 1100 & 1350 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>	55 litres
<b>Oil Capacity:</b>	33 litres
<b>Air Cleaner:</b>	Dry replaceable paper element
<b>Engine Driven P.T.O. provision:</b>	ED120

### Options:-

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

**'480'**

<b>Type:</b>	<b>DT12-17</b>
<b>*Max. Power:</b>	353kW (480 h.p.) at 1900 rev/min
<b>*Max. Torque:</b>	2250 Nm (1660 lbf.ft) between 1100 & 1450 rev/min

\*With fan at max. slip

## CLUTCH

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

## GEARBOX

**Type:** Scania GRS0905 fourteen speed overdrive with synchromesh on all except two crawler gears. Incorporating range change and splitter

**Oil Capacity:** 15.6 litres

### Options:-

**(1) Oil cooler – standard with DT12-17 engine**

## GEAR RATIOS

	Low Range Split		High Range Split	
	L	H	L	H
<b>Crawler</b>	13.28:1	10.63:1		
	9.16:1	7.33:1	2.44:1	1.96:1
	5.82:1	4.66:1	1.55:1	1.24:1
	3.75:1	3.00:1	1.00:1	0.80:1
<b>Reverse</b>	11.95:1			

### Options:-

**(1) Type:** Scania GRS905 fourteen speed range change/splitter including two crawler gears

**(2) Opticruise:** Gearchange management system.

## 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

**Type:** Scania R780  
Single reduction hypoid. Crown wheel and pinion matched during manufacture. Pneumatically operated differential lock.

## FRONT AXLE

**Type:** Scania AM950 I section rigid beam  
Scania AMA860 with air suspension

**Capacity:** AM950 - 9000Kg  
AMA860 – 8000Kg

## STEERING

**Type:** Recirculating ball. Hydraulically assisted power steering to first and last axle.

**Steering wheel:** Diameter 450mm. Lock to lock 4.9 turns

**Turning circle:** 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

**Type Front:** Semi-elliptic parabolic springs with swinging shackles and threaded shackle pins.

**Type Rear:** 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

**Front**

**Length:** 1820mm

**No. of leaves:** 3 x 29mm

**Design Capacity:** 8500Kg

### Options:-

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

## WHEELS & TYRES

**Front:** 9.00 x 22.5 ten stud spigot mounted disc wheels fitted with 315/80R22.5 radial tubeless tyres.

**Drive:** 9.00 ten stud spigot mounted disc wheels fitted with 315/80R22.5 radial tubeless tyres.

**Rear:** 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

**Type:** 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

### Sidemember Dimensions:

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

**Bumper:** Aerodynamic incorporating FUP

- Options:- (1) Steel bumper – increases front overhang to 1510mm.**
- (2) Centre tow pin – steel bumper only**

## BRAKE SYSTEM

**Type:** Ventilated disc brakes on all axles. Dual circuit, full air, EC brake system incorporating Category 1 ABS and Traction Control. 2 line EC trailer brake pipes to rear section of chassis. 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 and trailer brakes

**Secondary Circuit:** First position of park brake lever actuates spring brakes plus trailer 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) 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 180Ah

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

**Options:-**  
**(1) 140Ah 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	350	350	350
	450	450	400	400	400
			500	500	500
			600	600	600
			700	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 – N/A with ADR to EXIII/EXIII or FL.**  
**(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

**CR19 Sleeper Cab**

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

**Options:-**

- (1) CR16 Day Cab, (2) CR19 Highline, (3) CR19 Topline, (4) CG14 Short Cab, (5) CG16 Day Cab, (6) CG19 Sleeper, (7) CG19 Highline.**

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

Rear Mount	G670	GR875 / GRS895 / GR/S905	GRS0905
<b>Pump</b>	<b>Flange</b>		
EG551P	EG561F	0.54	
EG650P	EG660F		1.00 / 1.24H
EG651P	EG661F		1.28 / 1.58H
EG652P	EG662F		
EG653P	EG663F		0.82 / 1.03H
EK730	EK740		1.03 / 1.29H
		1.00	1.00

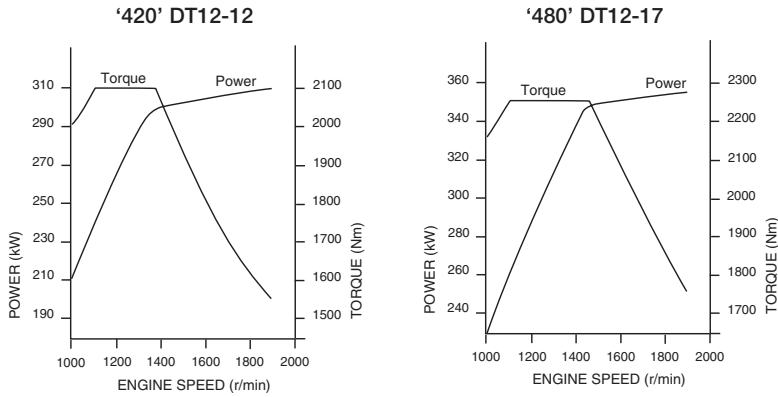
H= High on 'S' splitter gearboxes only.  
 Flange output N/A on 6x2/4 chassis.

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

Axle Distance	39	41	43	45	47	49	51	53	55	57	59	61
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 f/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	+86 +27 +113	+87 +26 +113	+87 +26 +113	+89 +24 +113	+91 +22 +113	+92 +21 +113	+92 +21 +113	+94 +19 +113	+95 +18 +113	+95 +18 +113	+95 +18 +113	+95 +18 +113
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	+45 +12 +57	+45 +12 +57	+45 +12 +57	+45 +12 +57	+45 +12 +57	+45 +12 +57	+45 +12 +57	+45 +12 +57	+45 +12 +57	+45 +12 +57	+45 +12 +57	+45 +12 +57
CR16 cab w/o defl	-151 -14 -165	-151 -14 -165	-151 -14 -165	-151 -14 -165	-151 -14 -165	-151 -14 -165	-151 -14 -165	-151 -14 -165	-151 -14 -165	-151 -14 -165	-151 -14 -165	-151 -14 -165
CR19 Highline cab	+27 +2 +29	+27 +2 +29	+27 +2 +29	+27 +2 +29	+27 +2 +29	+27 +2 +29	+27 +2 +29	+27 +2 +29	+27 +2 +29	+27 +2 +29	+27 +2 +29	+27 +2 +29
CR19 Topline inc. defl	+86 +8 +94	+86 +8 +94	+86 +8 +94	+86 +8 +94	+86 +8 +94	+86 +8 +94	+86 +8 +94	+86 +8 +94	+86 +8 +94	+86 +8 +94	+86 +8 +94	+86 +8 +94
CG14 short cab	-175 -20 -195	-175 -20 -195	-175 -20 -195	-175 -20 -195	-175 -20 -195	-175 -20 -195	-175 -20 -195	-175 -20 -195	-175 -20 -195	-175 -20 -195	-175 -20 -195	-175 -20 -195
CG16 day cab	-155 -14 -169	-155 -14 -169	-155 -14 -169	-155 -14 -169	-155 -14 -169	-155 -14 -169	-155 -14 -169	-155 -14 -169	-155 -14 -169	-155 -14 -169	-155 -14 -169	-155 -14 -169
CG19 sleeper cab	-26 -3 -29	-26 -3 -29	-26 -3 -29	-26 -3 -29	-26 -3 -29	-26 -3 -29	-26 -3 -29	-26 -3 -29	-26 -3 -29	-26 -3 -29	-26 -3 -29	-26 -3 -29
CG19 Highline cab	-3 0 -3	-3 0 -3	-3 0 -3	-3 0 -3	-3 0 -3	-3 0 -3	-3 0 -3	-3 0 -3	-3 0 -3	-3 0 -3	-3 0 -3	-3 0 -3
Air deflectors-CR16	+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
-CG16	+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
-CG19	+41 +6 +47	+41 +6 +47	+41 +6 +47	+41 +6 +47	+41 +6 +47	+41 +6 +47	+41 +6 +47	+41 +6 +47	+41 +6 +47	+41 +6 +47	+41 +6 +47	+41 +6 +47
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

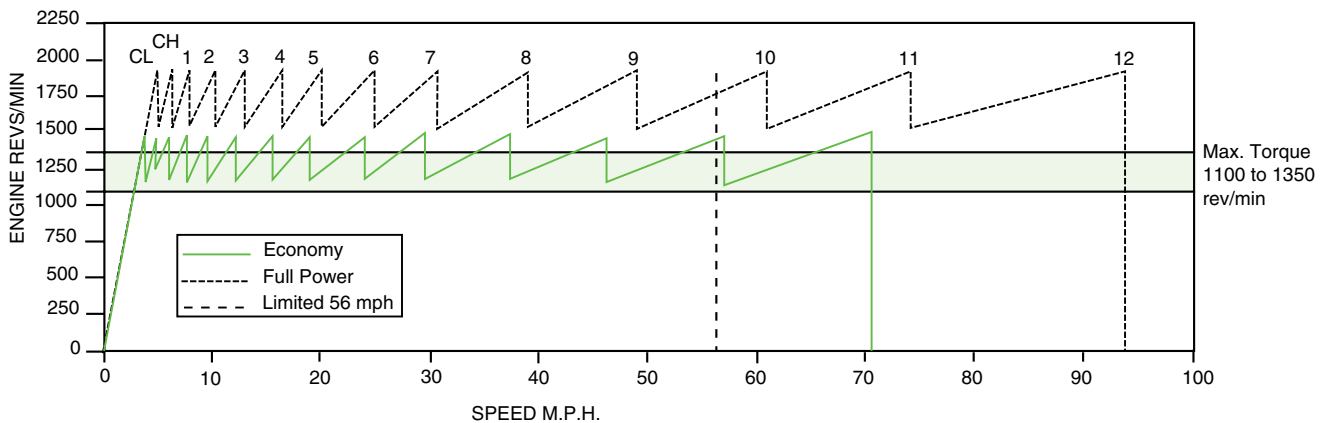
\* Additional to standard tank full of fuel.

### 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	Geared Speed M.P.H.		Gradeability - steady climb - in percent DT12-12			
	11th	12th	44T	60T	44T	60T
R 780 2.92*	75.1	93.8	>35	25.4	>35	27.3
R 780 3.08 Std	75.1	93.8	>35	25.2	>35	27.2
R 780 3.27	70.8	88.4	>35	26.9	>35	29.0
R 780 3.42	67.6	84.5	>35	28.3	>35	30.5
R 780 3.80	60.9	76.1	>35	31.8	>35	34.3

\*2.92 only available with low profile tyres. Calculations based on 315/70R22.5 rear tyres.

Remaining 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.**

