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DIRECTORATE GENERAL BORDER ROADS

GENERAL MAINTENANCE INSTRUCTION

No.11

TYRE PRESSURES

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DIRECTORATE GENERAL BORDER ROADS
GENERAL. MAINTENANCE INSTRUCTION

No. 11

Tyre Pressures

General

1. This Instruction lays down the pressures to which tyres in common use by units of DGBR are to be inflated and is intended to be a ready reference for use by units.
2. Detailed instructions regarding the preservation, maintenance, inspection and repair of tyres and tubes have been laid down in General Maintenance Instruction No 4, which should be studied with this instruction.
3. Attached as an annexure to this Instruction is a list of vehicles and equipment and recommended tyre pressures for each. The annexure has been arranged in alphabetical sequence to permit of easy reference, blank spaces being left for insertion of new makes and types as gradually introduced in service.

Variation in Tyre Pressures of Vehicles

4. Tyre pressures recommended in the annexure to this instruction are for normal roads and presume normal loads carried by the vehicle.
5. For cross-country running a 10% reduction may be safely used and where loads are not carried or reduced, a proportionate reduction in tyre pressure should be made. Similarly where road surfaces are poor a reduction in road tyre pressure from 5% to 10% should be made. A 6% increase may be retained in the spare wheel.
6. OC Workshops should advise units in case of doubt regarding the correct tyre pressure to be adopted.

Effects of Over and Under Inflation

7. Incorrect tyre pressures produce the following effects on tyres and tubes and the suspension system of a vehicle :- .

(a) Over inflation

- (i) Irregular wear on tyre (centre of tread) with probability of circumferential cracks inside wall.
- (ii) Increased susceptibility to blow-outs.
- (iii) Increased breakage of springs.
- (iv) Early failure of shock-absorbers.
- (v) Loosens bolts and nuts and rivets of chassis.

(b) Under inflation

- (i) Outer edges of tyre wear-out and tread and plies tend to separate.
- (ii) Steering becomes stiff and causes premature wear on steering-mechanism especially within steering-box and steering knuckles.
- (iii) Greater tendency to blow-outs due to over heating-and greater tendency to punctures.

8. Tyre pressures should be checked with a tyre pressure gauge which in turn should be checked by Workshops in case of doubt as to accurate functioning.

9. A quick check for correct tyre pressures may be made visually when the vehicle is standing on a flat hard surface. A normally inflated tyre under these conditions shows no bulge when viewed from the front or rear and when viewed from the side has a tangential ground contact of approximately $4\frac{1}{2}$ for the average vehicle wheel.

Conclusion

10. As correct tyre pressures greatly increase the life of tyres and vehicle suspensions and reduce the risk of accidents, it is incumbent on all users to ensure that this aspect is not neglected.

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Annexure to GMI No.11

TYRE PRESSURES

S/No	Make	Tyre	Vehicle Nomenclature	Size		Tyre Pressure (PSI)		Tyre Pressure Kg/Cm	
				Front	Rear	Front	Rear	Front	Rear
A-1	AUSTIN	K6	Lorry 4 Ton 6 X 4 Crane Turntable	9.02	9.00-20	35	60	2.5	4.2
2	AUSTIN	K6	Lorry 4 Ton 6 X 4 Crane Turntable	10.50-20	10.50-20	35	70	2.5	5
B-1	BSA	C11	Motor Cycle SOLO 250 CC	3.25-19	3.25-19	20	20	1.4	1.4
2	BSA	M20	Motor Cycle SOLO 500 CC	3.25-19	3.25-19	20	20	1.4	1.4
3	BEDFORD	J4L	Lorry 3 Ton	8.25-20	8.25-20	75	75	5.4	5.4

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S/No	Make	Tyre	Vehicle Nomenclature	Size		Tyre Pressure (PSI)		Tyre Pressure Kg/Cm	
				Front	Rear	Front	Rear	Front	Rear
C-1	CHEVROLET	8444	Truck 15 CWT 4 X 4 G.S	9.00-16	9.00-16	35	60	2.5	4.2
2	CHEVROLET	8443	Truck 3 TOn 4 X 4 G.S	10.50-20	10.50-20	35	70	2.5	5
D-1	Dodge	WC 51 WC 52	Truck 15 Cwt 4X4 G.S	7.50-16	7.50-16	30	50	2.1	3.5
2	Dodge	WC 51 WC 52	Truck 15 Cwt 4X4 G.S	9.00-16	9.00-16	25	50	1.7	3.5
3	Dodge	3/4 APT	Truck 15 Cwt 4X4 G.S	9.00-16	9.00-16	35	50	2.5	3.5
4	Dodge	CI-ZW6-70	Lorry 3 Ton 4X 4 (P6V Perkins Diesel Engine)	12.00-20	12.00-20	50	80	3.5	5.7

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S/No	Make	Tyre	Vehicle Nomenclature	Size		Tyre Pressure (PSI)		Tyre Pressure Kg/Cm	
				Front	Rear	Front	Rear	Front	Rear
E-1	Enfield	WDRE	Motor Cycle SOLO 125 CC	2.75-19	2.75-19	20	20	1.4	1.4
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F-1	Ford	GPW	Car 5 Cwt 4 X 4	5.50-16	5.50-16	20	20	1.4	1.4
2	Ford	GPW	Car 5 Cwt 4 X 4	6.00-16	6.00-16	20	20	1.4	1.4
3	Ford	GPW	Car 5 Cwt 4 X 4	7.50-16	7.50-16	20	20	1.4	1.4
4	Ford	C of I QF and C 29 Q	Truck 15 Cwt 4 X 4 water 200/220 Gallons	10.50-20	10.50-20	35	70	2.5	5
5	Ford	C 291	Truck 15 Cwt 4 X 4 water 200/220 Gallons	10.50-20	10.50-20	35	40	2.5	2.8
6	Ford	C 291 QW	Truck 15 Cwt 4 X 4 GS	9.00-16	9.00-16	45	55	3.2	3.9
7	Ford	C 291 WQ	Truck 15 Cwt 4 X 4 GS	10.50-16	10.50-16	30	35	2.1	2.5
8	Ford	C 298 Q	Lorry 3 Ton 4 X 4 G.S	10.50-20	10.50-20	35	65	2.5	4.6

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S/No	Make	Tyre	Vehicle Nomenclature	Size		Tyre Pressure (PSI)		Tyre Pressure Kg/Cm	
				Front	Rear	Front	Rear	Front	Rear
19	Ford	C298 Q	Lorry 3 Ton 4 X 4 Break down medium	10.50-20	10.50-20	35	50	2.5	3.5
10	Ford	C298 Q	Lorry 3 Ton 4 X 4 Petrol 800 Gallons	10.50-20	10.50-20	35	70	2.5	5

G-I

H-I	Hokuetsu	AMR-70	Compressor Air MAN AIR MAN AIR MAN COMPAC	3.00-16	2 Wheeled	20	1.4
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S/No	Make	Tyre	Vehicle Nomenclature	Size		Tyre Pressure (PSI)		Tyre Pressure Kg/Cm	
				Front	Rear	Front	Rear	Front	Rear
I-I	INGERSOLL RAND	DR 250	Compressor 250 Cfm	7.50-16	2 Wheeled	60		4.2	
2	INGERSOLL RAND	DR 365	Compressor 365 Cfm	6.50-16	6.50-16	48	48	3.4	3.4
3	INTERNATIONAL	B-124	Truck 1 Ton	7.50-16	7.50-16	45	45	3.2	3.2
J-I									
K-I	KIRLOSKAR	WR 120	Compressor Portable	7.00-19	2 Wheeled	45		3.2	
2	KIRLOSKAR	WR 120	Compressor Portable	7.00-19	2 Wheeled	45		3.2	

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S/No	Make	Tyre	Vehicle Nomenclature	Size		Tyre Pressure (PSI)		Tyre Pressure Kg/Cm	
				Front	Rear	Front	Rear	Front	Rear
L-1									
M-I	MATCHLESS	G3L	Motor Cycle Solo 250 CC	3.25-19	3.25-19	20	1.4	1.4	1.4
2	MORRIS	C4/AC CS8	Truck 15 Cwt 4 X 2 Compressor	9.00-16	9.00-16	35	2.5	2.5	2.5
N-I									
N-I	NISSAN	60,G60	Patrol	6.50-16	6.50-16	22	30	1.5	2.1

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S/No	Make	Tyre	Vehicle Nomenclature	Size		Tyre Pressure (PSI)		Tyre Pressure Kg/Cm	
				Front	Rear	Front	Rear	Front	Rear
2	NISSAN	4W 73	Carrier 1 Ton	7.50-20	7.50-20	39	64	2.8	4.6
O-I									
P									
Q									

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S/No	Make	Tyre	Vehicle Nomenclature	Size		Tyre Pressure (PSI)		Tyre Pressure Kg/Cm	
				Front	Rear	Front	Rear	Front	Rear
R-I									
S-1	STUDEBAKER	3R48	Lorry 3 Ton 4 X 4	12.00-20	12.00-20	50	80	3.5	5.7
2	SHAKTIMAN	415LIAR	Lorry 3 Ton 4 X 4	8.25-20	8.25-20	77	77	5.5	5.5
3	SCAMMELL		Tractor 6 X 4 for transporter 30 Ton 6X4X8 Recovery	13.50-20	15.00-20	50	100	3.5	7.1
T-1	TRIUMPH	3SW 3 HW	Motor Cycle Solo 350 CC	3.25-19	3.25-19	20	20	1.4	1.4

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S/No	Make	Tyre	Vehicle Nomenclature	Size		Tyre Pressure (PSI)		Tyre Pressure Kg/Cm	
				Front	Rear	Front	Rear	Front	Rear
2	TATA MERCEDES BENZ	L312	Lorry 3 Ton	8.25-20 SINGLE	8.25-20 DOUBLE	60.5	74.5	4.3	5.3
U									
V									
W-1	WILLYS	CJ2A	Car 5 Cwt 4 X 4	6.00-16	6.00-16	28	30	2	2.1
2	WILLYS	CJ2A	Car 5 Cwt 4 X 4	7.00-15	7.00-15	20	21	1.4	1.5

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S/No	Make	Tyre	Vehicle Nomenclature	Size		Tyre Pressure (PSI)		Tyre Pressure Kg/Cm	
				Front	Rear	Front	Rear	Front	Rear
