

F M E

FAHRZEUG- UND MASCHINENBAU GMBH, REGENSBURG LILIENTHALSTRASSE

Telefon: 30773/774 Fernschreiber 065/882

SPORTS · CAR · TG 500

Setting Data

Service Diagram

Greasing Diagram

Technical Data

- 1.) Tyres 4.40 x 10 S Highspeed sports tyres  
(up to 93 miles/hour)
- 2. Tyre Pressure: Normal  
Front 15,7 - 17,1 lb/sq inch  
Rear 22,8 - 25,6 " "  
Spare wheel 28 " " (reduced when in use)
- 3.) Tank Volume Full ca. 6,6 gallons approx.  
Reserve 0,77 " "
- 4.) Mixture - Petrol - Oil 1 : 25 good brand petrol (not super!)  
SAE 40 (good brand for two stroke)
- 5.) Gearbox Oil 91 cubic inch SAE 80 (Do not use Hypoid Oil)
- 6.) Running-in Spceds  

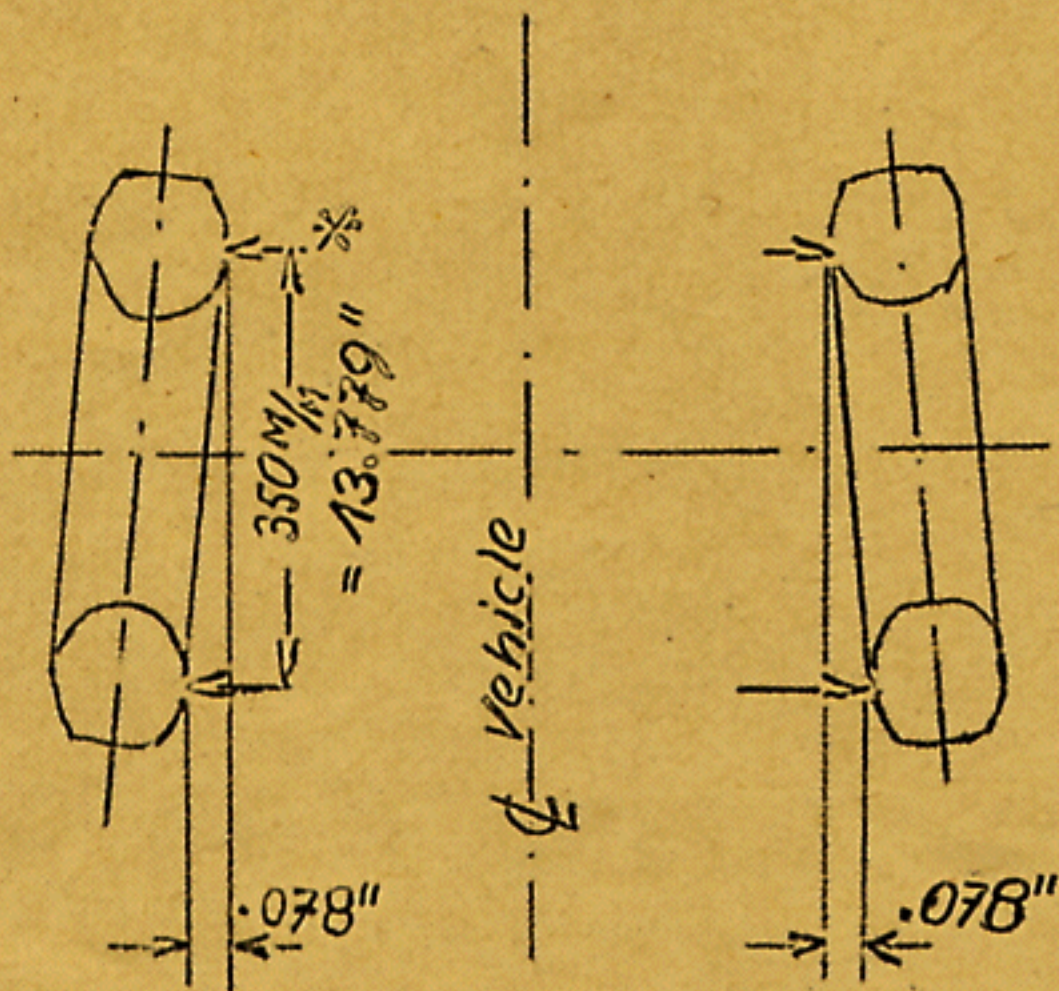
	<u>0 - 310 miles</u>	<u>310 - 930 miles</u>	<u>930 - 2200 miles</u>	<u>Over 2200</u>
1st	0 - 10	0 - 15	0 - 20	0 - 20
2nd	10 - 20	15 - 30	20 - 35	28 - 35
3rd	20 - 35	30 - 40	35 - 50	35 - 60
4th	35 - 50	40 - 60	50 - 70	60 - 75
- 7.) Spark-Plug 240 T 1 for normal use/  
distance between electrodes 023 inch
- 8.) Ignition Adjustment red marker on belt = red marker housing
- 9.) Contact Breaker Distance 023 inch
- 10.) Clutch Adjustment Free play on clutch must be maintained !  
To be measured at clutch pedal (upper face)  
= 1.18 " - 1.5 "  
or at engine clutch lever (adjusting screw)  
= .23" - .35 "  
or at clutch pressure pin = .039"-.055"
- 11.) Carburettor Adjustment Free wheel jet 54  
Step I 68  
Step II 90  
Step III 122

12.) Wheel Gauge and Inclination

Fully Loaded  
Wheel Gauge

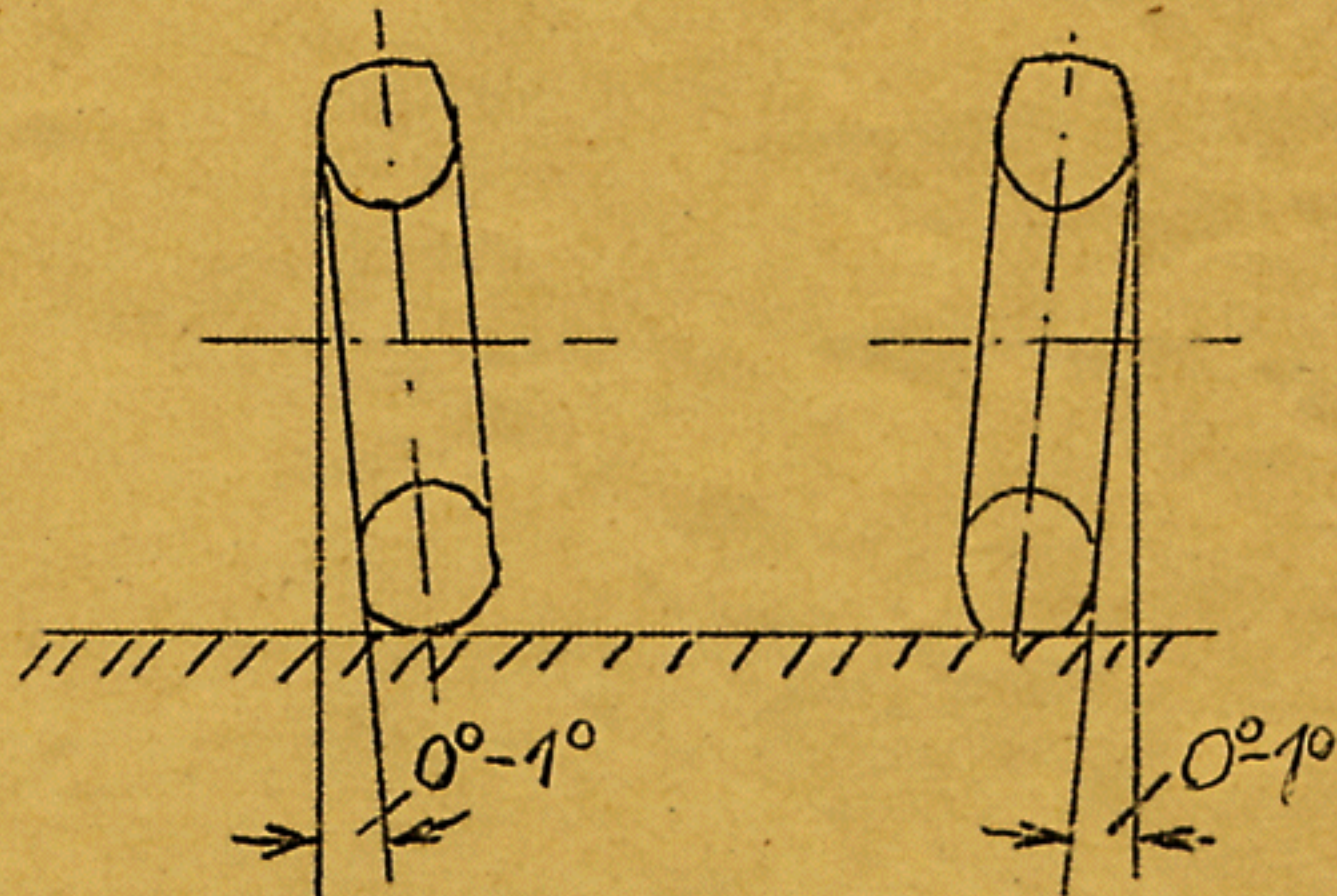
per Wheel		
Front	.078"	advanced gauge
Rear	.078"	advanced gauge
Front	0° - 1°	
Rear	0° - 1°	

Advanced Gauge  
Front and Rear

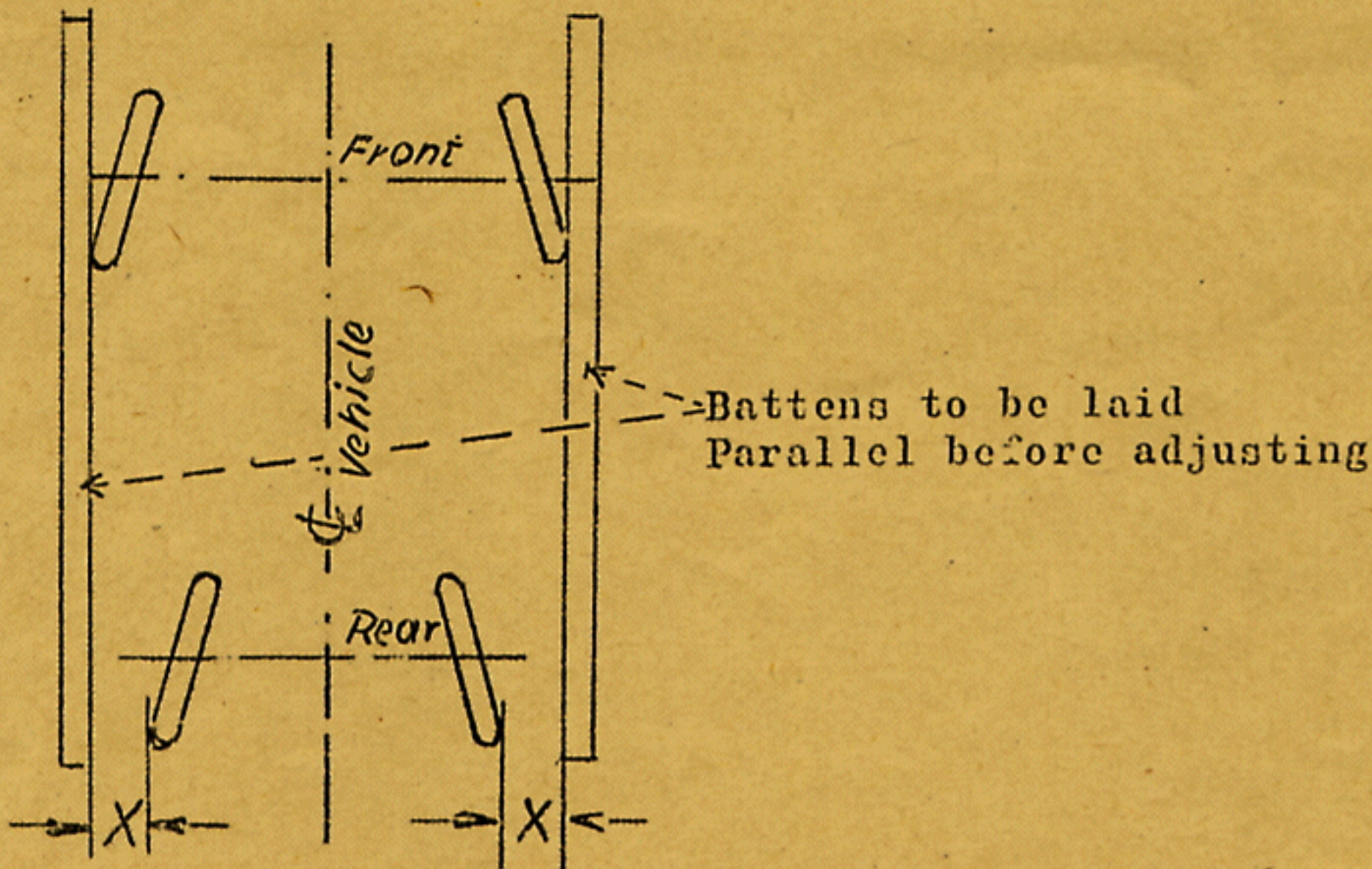


\* Take Measurement on Tyre cheeks,  
marked with →

Inclination  
Front and Rear



Take into consideration any  
thickening on tyre cheeks.  
Wheel gauges front and rear to  
be adjusted in relation to each  
other.



Dimension X to be same on  
left and right.

Wheel Gauge Adjustment on front wheels is best done by increasing the lengths of the steering gear connecting rods. Release counter nuts on the rods, and note that the thread on steering lever is right handed, whereas on the steering column itself the thread is left handed.

In accordance with required adjustment turn the rod in either right hand or left hand direction.

See that steering handle is "square"-on, before making adjustments.  
Re-set counter nuts.

Inclination of Front Wheels. This is achieved by adjusting the serrated plate either up or down. This plate is mounted on the sump, and is held by screws in elongated slots.

Tie nut after completion of adjustment. (See that serrations (or teeth) match properly).

Adjustment of Rearwheel Gauge. Loosen bolts, situated in slotted holes in hub bracket, and pay attention to ratchet seating in hub bracket, which prevents mal-adjustment once the bolt is screwed home.

Tie nut after completion of adjustment. (See that teeth engage properly)

Inclination of Rearwheels. Free the top two screws, left and right on spring-lug seating (rear frame) and move serrated plate. Tie nut after adjustment and see that teeth match properly.

### Note

- 1.) In all cases make sure that the teeth on matching serrated plates are engaged before turning screws home.
- 2.) Wheel gauge and inclination to be effected on level flooring. After each adjustment is complete, rock the vehicle and at the same time shunt back shunt back and forth and finally allow it to roll forward a few yards.

If, when operating the gear lever into 1st, the gears will not engage at once and the lever will not snap into its lock, release clutch pedal slightly until gears begin to turn and lever snaps into 1st.

Note

a) When changing upward: 1., 2., 3., 4., pause between changes !

b) When changing down: 4., 3., 2., 1, inter-accelerate !

a) Pause Between Changes: means that the gear lever is kept in neutral for a second or two before changing to next gear.

b) Intermittent Acceleration: As follows: -

1.) Decelerate and de-clutch

2.) Gear lever to neutral

3.) Clutch-in, and in accordance with travelling speed, accelerate more or less

4.) De-clutch and engage required lower gear

5.) Clutch-in and accelerate simultaneously

Do not engage reverse-gear unless vehicle has been brought to a complete halt.

Inspection at 200 miles

(Free of charge)

1. Test drive
2. Change gearbox oil (5 1/4 pints)
3. Check contact breaker gap (0.5 mm) and timing (test with engine hot)
4. Test clutch travel and adjust if necessary (cable travel at clutch lever on engine 9 - 12 mm corresponds to 26 - 46 mm pedal travel).
5. Check idling and if necessary adjust.
6. Clean fuel filter.
7. Check V belt for tension and if necessary adjust.
8. Check the brake system for function and check the brake fluid.  
Test connections and pipes against leakage.
9. Grease the vehicle completely (remove excess grease from left inside of universal joint to prevent reaching V belt and brake hose).
10. Test tyre pressures. Front 16 1/4 to 17 1/2 lbs.  
Rear 23 1/2 to 26 1/2 lbs.
11. Tighten all wheel nuts, body screws, engine mounting screws, nuts on exhaust system, fuel pump, carburettor and dynamo mounting.
12. Test wheel "Toe in" and camber and if necessary adjust.
13. Test electric functions, test battery, test headlight setting and if necessary adjust.
14. Test battery leads, electric leads, cables and brake system connections for signs of abrasion.
15. Test drive.

Inspection at 1500 miles

(Free of charge)

1. Test drive
2. Test gearbox oil level and if necessary fill up (5 1/4 pints).
3. Test contact breaker gap (0.5 mm) and timing (engine must be hot) and check plugs.
4. Check clutch travel and if necessary adjust (cable travel at clutch lever on engine 9 - 12 mm corresponds to 26 - 46 mm pedal travel).
5. Clean carburettor and air filter, wet air filter with oil. Check idling if necessary adjust.
6. Clean fuel filter, check fuel pipe and vacuum pipe for looseness.
7. Check V belt for tension and if necessary adjust.
8. Test brake system for functioning and check brake fluid. Test connections and pipes for leakage.
9. Grease vehicle completely (remove excess grease from left inside of universal joint to prevent grease reaching V belt and brake hose).

10. Check tyre pressures. 16 1/4 - 17 1/2 lbs. front  
23 1/2 - 26 1/2 lbs. rear.
11. Tighten all wheel nuts, body screws, engine mounting screws, nuts on exhaust system, fuel pump, carburettor and dynamo mounting.
12. Check steering.
13. Test wheel "Toe in" and camber and if necessary adjust.
14. Check electric functions, test battery.
15. Test drive.

Service after each 3000 miles

(For example after 3000-6000-9000 miles etc.)

Service time 3 1/2 hours.

1. Test drive.
2. Test gearbox oil level and if necessary adjust. 5 1/4 pints.
3. Clean contact breaker, test gap (0.3 mm) and timing (engine must be hot) and check plugs.
4. Check clutch travel and if necessary adjust (cable travel at clutch lever on engine 9-12 mm corresponds to 36 - 46 mm pedal travel).
5. Clean carburettor and air filter, wet air filter with oil. Check idling and if necessary adjust.
6. Clean fuel filter, check fuel pipe and vacuum pipe for looseness.
7. Check V belt for tension and test pulley and nut for looseness, if necessary, tighten.
8. Test hand and foot brake for perfect functioning, if necessary, adjust or bleed.
9. Grease vehicle completely (remove excess grease from left inside of universal joint to prevent grease reaching V belt and brake hose).  
Oil dome structure hinge and gear-change system pivots.
10. Inter-change wheels and test tyre pressures. Front 16 1/4 - 17 1/2 lbs.  
Rear 23 1/2 - 26 1/2 lbs.
11. Tighten all wheel nuts, body screws, engine mounting screws, nuts on exhaust system, fuel pump, carburettor and dynamo mounting.
12. Check steering for easy movement.
13. Check cabin lock and if necessary adjust.
14. Check dome strap for length (maximum 34").
15. Test wheel "Toe in" and camber and if necessary, adjust.
16. Check electric functions, test battery, check acid level and gravity, check headlight setting and, if necessary, adjust.
17. Test battery leads, electric leads, cables and brake system connections.
18. Test drive.

Service after each 6000 miles

(For example after 6000-12000-18000 miles etc.)

Service time 5 1/2 hours

1. Test drive
2. Change gearbox oil (5 1/4 pints)
3. Clean contact breaker, test gap (0.5 mm) and timing (engine hot) and check plugs.
4. Check clutch travel and if necessary adjust (cable travel at clutch lever on engine 9 - 12 mm corresponds to 36 - 46 mm pedal travel)
5. Clean carburettor and air filter, wet air filter with oil. Check idling and if necessary adjust.
6. Clean fuel filter, check fuel pipe and vacuum pipe for looseness.
7. Test V belt for tension and test pulley and nut for looseness, if necessary tighten.
8. Test hand and foot brake for perfect functioning and if necessary adjust. Check brake fluid and if necessary bleed, test connections and pipes for tightness. Check brake linings for wear.
9. Grease vehicle completely (remove excess grease from left inside of universal joint to prevent grease reaching V belt and brake hose). Oil dome structure hinge and gear-change system pivots.
10. Interchange wheels and test tyre pressures. Front 16 1/4 - 17 1/2 lbs.  
Rear 23 1/2 - 26 1/2 lbs.
11. Tighten all wheel nuts, body screws, engine mounting screws, nuts on exhaust system, fuel pump, carburettor and dynamo mountings.
12. Check steering for easy movement.
13. Check cabin lock and if necessary adjust.
14. Check dome strap for length (max. 34")
15. Test wheel "Toe in" and camber and if necessary adjust.
16. Test electric functions, test battery, check acid level and gravity, check headlight setting and if necessary adjust.
17. Check shock absorber action and test for looseness.
18. Check gear-change adjustment.
19. Test battery leads, electric leads, cables and brake system connections for signs of abrasion.
20. Test drive.
  - A Test and clean dynamo every 12,500 miles  
Grease bearing (by Bosch workshops)
  - B After every 12,500 miles renew valve plate of fuel pump.
  - C After every 25,000 miles renew V belt.
  - D After every 37,500 miles check wheel hub ball bearings and if necessary pack with grease.



Grease Table

O = Oil

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Gearbox Oil:	Gearbox 1500 cen Fill	SAE 80 Under <u>No</u> circumstances use Hypoid Oils
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Lubrication Oil:	Gear Lever, etc. Bearings Connet King, Foot Levers	SAE 10
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F = Grease

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Grease	Clutch Lever Bearings, Wheel Shaft Link Bolts Left and Right	Best brand grease of good adhesive quality
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Grease	Drive Shaft, Left and Right Hub Bearings Left and Right	Best brand grease of good adhesive quality
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Grease	xx Dynamo Bearings	Bosch - special grease Pt 1 V 22
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	xx Cam Track and Greasing Belt	Bosch - Hot bearing grease Pt 1 C 4
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	Cam Core, Adjustment Shaft Bearings and Sliding Faces of Governor, as well as Contact Breaker Arm Bearings	Bosch - Special grease Pt 1 V 3
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xx These services should only be rendered by either Bosch or properly  
authorised electrical engineering establishments.

At 300 Miles	1500	2000	4500	6000	12000	Grease Point		$\frac{O}{F}$ = Oil Grease
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---	---	---	---	---	---	Wheel Shaft Link Bolts Left & Right	"	F
---	---	---	---	---	---	Drive Shaft Left & Right	"	F
				---	---	Hub Bearings	Every 6000	F
---	---	---	---	---	---	Gear Lever Bearings	At 300 Miles and Every 1500	C
	---	---	---	---	---	Donnet Hinge	Every 1,500	C
---				---	---	Oil Change	Every 6000	O
---	---	---	---	---	---	Foot Lever Lefts to be Oiled	At 300 Miles and Every 1500	O
	---	---	---	---	---	Contact Breaker Arm Bearing, Cam Track and Lubricating Felt	Every 6000	F
				---	---	Dynamo Bearings Greased	Every 6000	F
		---	---	---	---	Air Filter Cleaned and Wetted with Oil	Every 2000	O
				---	---	Cam Bore, Adjusting Shaft, Bearing & Sliding. Faces of Governor	Every 6000	F