REAR SUSPENSION

§ 07 2 2000

REMOVING AND REFITTING THE REAR SUSPENSION CROSSMEMBER
(Refer to Fig. 07 2/9)

After driving the car on the pit, please *proceed as follows*:

Removing

— Working in the pit: apply the hydraulic jack fitted with a wooden block and lightly relieve the mounting bolts (12), then unlock the relative nuts.
— Remove the fuel tank guard (11) and remove the nuts which secure the crossmember (14) to the bodywork.
— On the cars fitted with the headlamp automatic aiming device, remove the rear sensor complete with support bracket from the crossmember.
— Lower the jack lightly and take off the crossmember (14) from the floor pan, then lower the jack more as far as it possible to withdraw the bolts (12) together with washers and spacers from the crossmember, then salvage the latter.

Refitting

— Refit the components in the reverse order to the removal, fit the bolts (12) to the transverse links and crossmember with the bolt heads facing forward.
— Tighten the nuts which secure the crossmember to the floor pan to the torque loading stated on the sheet DT-Beta-07/0010.
— With the use of the fixture 88033413 load the rear suspension, before locking the nuts of the transverse link mounting bolts (12). The fixture shall be secured to the crossmember through the two clamps and the fixture ends shall rest against the bases of the suspension struts (Refer to Fig. 07 2/10).
— The strut springs shall be compressed to the dimension stated on the sheet DT-Beta-07/0040 by acting on the two bolts of the fixture. Use the tool 88035420 to gauge such dimension.
— Tighten the nuts of the bolts (12) which secure the transverse links to the crossmember

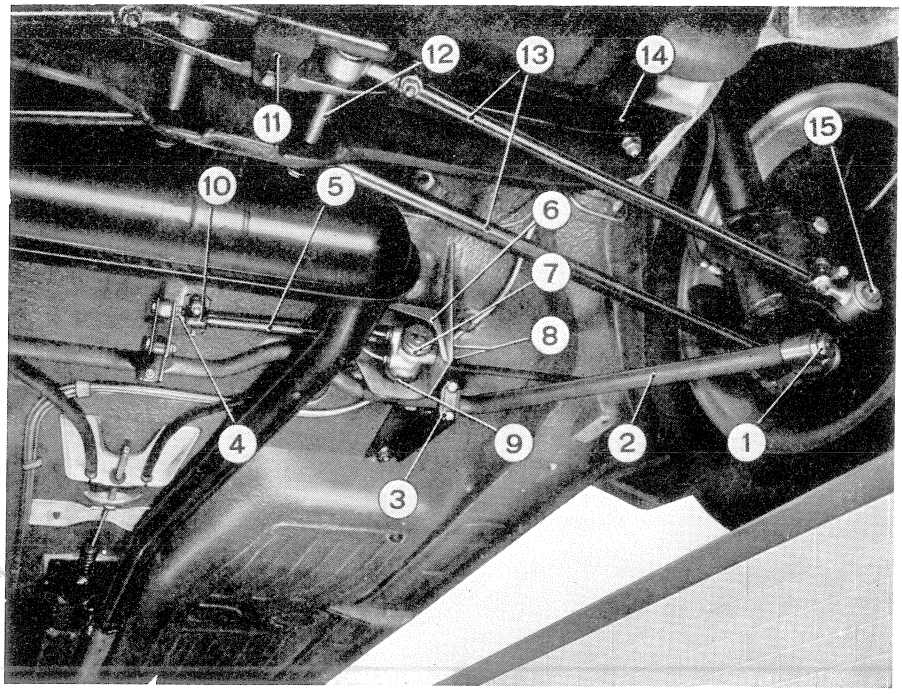

Fig. 07 2/9 - Rear Suspension

1. Stabilizer bar mounting nut - 2. Stabilizer bar - 3. Stabilizer bar support - 4. Brake rear limiting valve control shackle bar bolt - 5. Brake rear limiting valve control spring rod - 6. Brake rear limiting valve support bracket - 7. Brake rear limiting valve - 8. Brake rear limiting valve mounting bolts - 9. Dust guard - 10. Brake rear limiting valve control spring rod mounting clamp - 11. Fuel tank guard - 12. Transverse link bolts - 13. Transverse links - 14. Crossmember - 15. Transverse link fixing bolt.

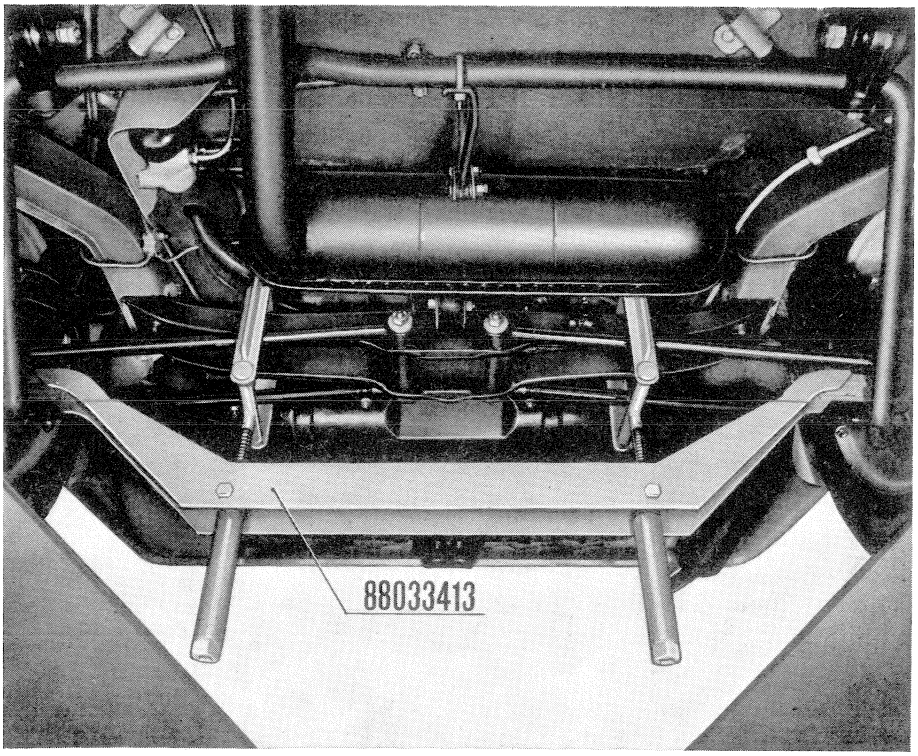

Fig. 07 2/10 - Fixture to Load the Rear Suspension

to the torque loading stated on the sheet DT-Beta-07/0010 with the use of the spanner 88021408.
— Remove the fixture 88033413 and the tool 88035420 from the suspension strut.

TOOLS REQUIRED

— Open and ring ended spanners, 8 mm. (88091371), 13 mm. (88091375), 17 mm. (88091377).
— Box jointed spanner, 17 mm. (88091296).
— Box spanner, 10 mm. (88091316).
— 88021408 — Spanner to lock transverse link mounting bolts.
— 88035420 — Tool to check rear suspension trim.
— 88091135 — Torque spanner.

SAT SHEETS MENTIONED

— DT-Beta-07/0010 — Torque loadings.
— DT-Beta-07/0040 — Dimensions to lock silent blocks and buffers.

§ 07 2 2200

RENEWING THE REAR STABILIZER BAR SILENT BLOCKS
(See Fig. 07 2/11)

Drive the car on the pit and please, *proceed as follows*:

Removing

Working in the pit:
— Remove the caps (1) from the stabilizer bar front supports (4).
— Remove the nuts and withdraw the bolts (2) from the front mounting support brackets (3).
— Remove the front supports (4) complete with silent blocks from the support brackets (3).

At the Press

Silent blocks and supports fitted up to car No. :
— Place the support on the base "A" of the tool 88032411 and drive off the silent block with the use of the removing tool, bearing same number.
— To install the new silent block, fit the support to the base "A" and insert the silent block by using the removing tool mentioned above and the spacer 88032411 and making sure the spacer abuts against the support.

Silent blocks and supports fitted from car No. :
— Place the support on the base "B" of the tool 88032411 and drive off the silent block with the use of the removing tool, bearing same number.

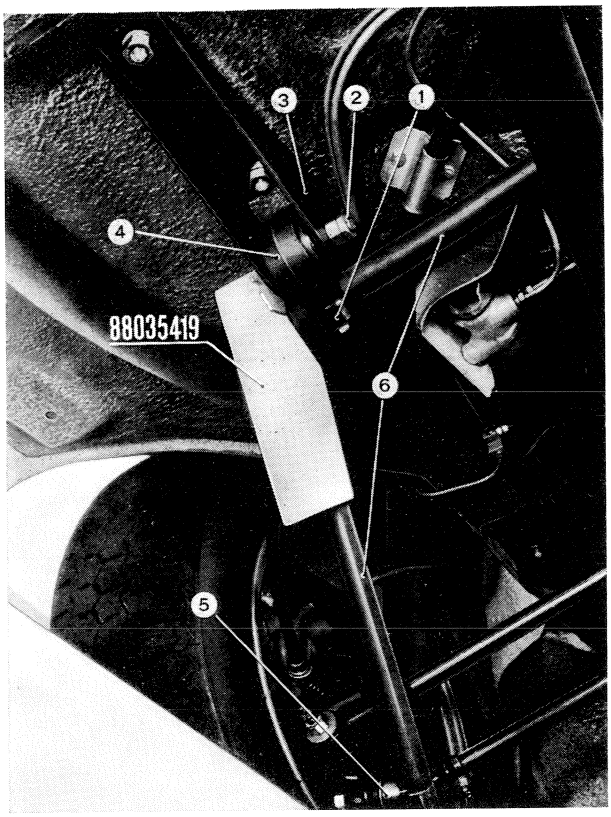

Fig. 07 2/11 - Rear Stabilizer Bar Front Mounting

1. Cap - 2. Mounting bolt - 3. Front support bracket - 4. Support - 5. Ball joint - 6. Rear stabilizer bar.

— To fit the new silent block, arrange the support on the base "B" and fit the silent block by using the removing tool mentioned above and taking care that the nylon portion of the silent block does not protrude from either surface of the support.

Note - The silent blocks must be fitted to the supports with the recesses horizontal as shown in Fig. 07 2/12, ref. No. 5.

Refitting

In the pit:

— Refit the supports (4) to the brackets (3) and secure by inserting the bolts (2) but without tightening the nuts.
— Fit the stabilizer bar (6) to the front supports (4) and then apply the caps (1), fit the lock plates and the bolts, but do not lock the latter.
— Displace the bolt (2) outwardly by some millimetres, then insert the tool 88035419 between the bolt head and the support (See Fig. 07 2/11).

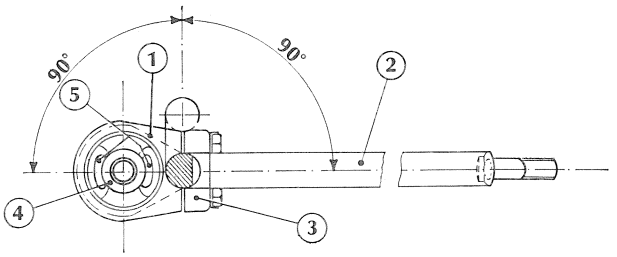

Fig. 07 2/12 - Aligning the Stabilizer Bar and the Front Mounting Support

1. Support - 2. Stabilizer bar - 3. Front mounting cap - 4. Bolt - 5. Silent block.

— Check and if necessary, align the stabilizer bar (6) with the support (4), then tighten the bolts which secure the mounting cap (1) to the torque loading stated on the sheet DT-Beta-07/0010.
— Check and align if required, the stabilizer bar and the support on the other side and tighten the cap mounting bolts as specified above, then remove the tool 88035419.
— With the use of the fixture 88033413 bring the suspension to the static load (See sheet DT-Beta-07/0040) and check the dimension prescribed by using the tool 88035420.
— Tighten the mounting bolts (2) to the torque loading stated on the sheet DT-Beta-07/0010, then remove the fixture 88033413 and the tool 88035420 previously used to load the rear suspension.

TOOLS REQUIRED

— Screwdriver — Pliers — Hammer.
— Box spanner, 13 mm. (88091319).
— Sockets, 13 mm. (88091214), 19 mm. (88091220).
— Open and ring ended spanner, 19 mm. (88091378).
— 88032411 — Removing-installing tool.
— 88033413 — Fixture to load the rear suspension.
— 88035419 — Tool to align the stabilizer bar.
— 88035420 — Tool to check the rear suspension trim.
— 88091135 — Torque spanner.

SAT SHEETS MENTIONED

— DT-Beta-07/0010 — Torque loadings.
— DT-Beta-07/0040 — Dimensions to lock silent blocks and buffers.

§ 07 2 2300

REMOVING AND REFITTING THE REAR STABILIZER BAR

(See Fig. 07 2/11)

Drive the car on the pit and please, *proceed as follows*:

Removing

— With the use of an hydraulic jack and attachment 88097827, jack up the rear end of the car and rest it on the stands.

Working in the pit:

— Remove the nuts which secure the ends of the stabilizer bar (6) to the ball joints (5) fitted to the stub shafts.
— Remove the brake rear limiting valve control lever from the stabilizer bar (6).
— Fit the fixture 88033412 to the stabilizer bar ends and lock it with the relative bolts.
— Remove the caps (1) from the stabilizer bar front supports (4).
— Withdraw the stabilizer bar (6) from the ball joints (5). To facilitate the withdrawal, act on the fixture in stages, so as to draw the bar ends nearer each other and extract them without damaging the threading.
— Clear the stabilizer bar from the exhaust piping and lift it off.

Refitting

— Refit the stabilizer bar to the ball joints (5) and to the supports (4) in the reverse order to the removal, but do not tighten the cap fixing bolts (1).
— Slacken the nut (2) and move the support mounting bolt outwardly by some millimetres, then fit the tool 88035419 between the bolt head and the support (See Fig. 07 2/11).
— Align the stabilizer bar with the front support (Refer to Fig. 07 2/12) then lock the bolts which secure the caps (Ref. 3 in Fig. 07 2/12) to the torque loading stated on the sheet DT-Beta-07/0010 and bend the lock plate tabs.
— Align the components fitted to the other side and tighten the cap mounting bolts as specified above.
— With the use of the fixture 88033413 bring the car under static load as specified on the sheet DT-Beta-07/0040 and gauge the dimension prescribed with the tool 88035420.
— Withdraw the tool 88035419 used to align the stabilizer bar and tighten the nuts (2) to the torque loading stated on the sheet DT-Beta-07/0010, then take off the fixture 88033413 from the suspension crossmember.

TOOLS REQUIRED

— Sockets, 13 mm. (88091214), 19 mm. (88091220), 22 mm. (88091223).
— Open and ring ended spanners, 10 mm. (88091372), 19 mm. (88091378), 22 mm. (88091379).
— Box spanner, 13 mm. (88091319).
— 88033412 — Fixture to retain the stabilizer bar.
— 88033413 — Fixture to load the rear suspension.
— 88035419 — Tool to align the stabilizer bar.
— 88035420 — Tool to check the rear suspension trim.
— 88091134 } Torque spanners.
— 88091135 }
— 88097120 — Stands.

SAT SHEETS MENTIONED

— DT-Beta-07/0010 — Torque loadings.
— DT-Beta-07/0040 — Dimensions to lock the silent blocks and buffers.

§ 07 2 2310

RENEWING THE REAR STABILIZER BAR END BALL JOINT

Having driven the car on the pit, please *proceed as follows*:

Removing

— Remove the hub cap and loosen the bolts which secure the road wheel concerned.

In the pit:

— With the use of an hydraulic jack and attachment 88097827, jack up the rear end of the car and rest it on the props.
— Get out of the pit and remove the road wheel.
— Go down in the pit again, apply the fixture 88033412 to the stabilizer bar and lock it with the relevant bolts.

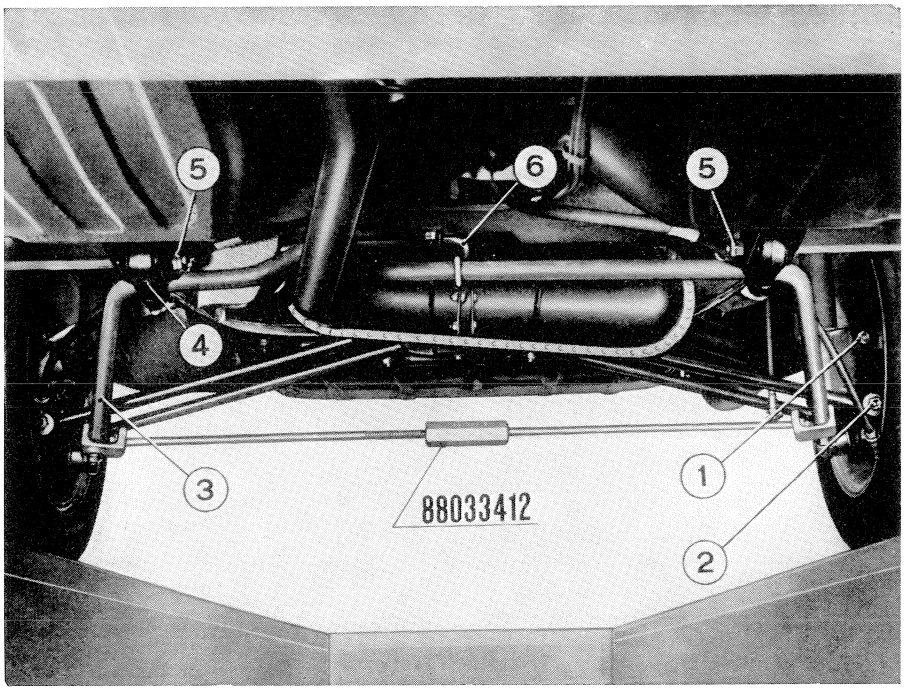

Fig. 07 2/13 - Fixture to Remove Rear Stabilizer Bar

— Remove the nut which secures the stabilizer bar to the ball joint.
— Partly unscrew the nut which secures the ball joint to the stub shaft.
— Using the removing tool 88062029, drive off the ball joint from the stub shaft and remove the nut from the ball joint.
— Withdraw the ball joint from the stub shaft and stabilizer bar by acting on the fixture 88033412 as required.

Refitting

— Refit the parts removed in the reverse order to the removal and tighten the ball joint-to-stub shaft mounting nut (using spanner 88041152) and the stabilizer bar-to-ball joint securing nut to the torque loadings stated on the sheet DT-Beta-07/0010.
— Remove the fixture 88033412 from the stabilizer bar.

TOOLS REQUIRED

— Screwdriver — Hammer.
— Spanners, 13 mm. (88091247), 30 mm. (88091256).
— Box spanner, 19 mm. (88091325).
— Open and ring ended spanner, 22 mm. (88091379).
— 88033412 — Fixture to retain the stabilizer bar.
— 88041152 — Spanner to torque tighten ball joints.
— 88062029 — Removing tool for stabilizer bar ball joints.
— 88091135 — Torque spanner.
— 88097827 — Attachment.

SAT SHEETS MENTIONED

— DT-Beta-07/0010 — Torque loadings.

§ 07 2 2400

REMOVING AND REFITTING THE REAR SUSPENSION STRUT

Having driven the car on the pit, please *proceed as follows*:

Removing

— Remove the hub cap and loosen the bolts which secure the road wheel concerned.

In the pit:

— Using an hydraulic jack fitted with the attachment 88097827, jack up the car, rest it on a stand and take off the road wheel.

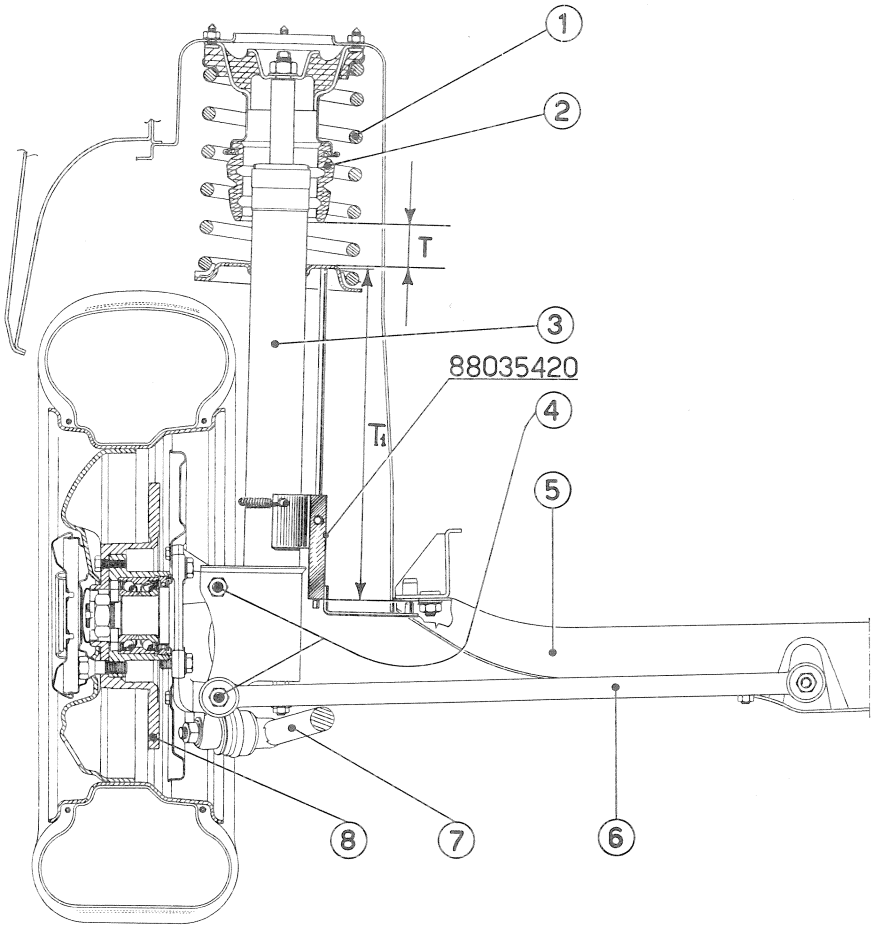

Fig. 07 2/14 - Rear Suspension Strut

1. Coil spring - 2. Bumper - 3. Strut - 4. Strut-to-stub shaft fixing bolts - 5. Transverse links mounting crossmember - 6. Transverse link - 7. Stabilizer bar - 8. Brake disc.

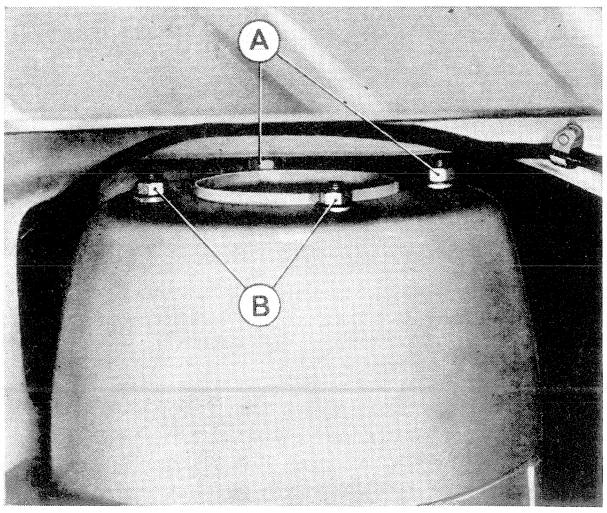

Fig. 07 2/15 - Nuts to Secure the Rear Suspension Strut to the Bodywork

— Apply the fixture 88033412 to the stabilizer bar ends and lighty tighten it.
— Withdraw the bolts (Ref. 4 in Fig. 07 2/14) which secure the strut to the stub shaft and transverse links.
— Disconnect the strut bottom end from the stub shaft and hang up the wheel hub and brake caliper assy. to the bodywork, taking care not to stretch the brake hose.
— Step out of the pit, remove the seats and the rear seat backrest. Lift up the ends of the rear shelf trim panel and by acting through the openings provided, remove the nuts (A, B in Fig. 07 2/15) which secure the strut to the body shell, then lift off the suspension strut assy. through the wheelarch (1).

(1) To overhaul the rear suspension strut, please refer to § 07 4 1000.

— On the Coupe: take off the spare wheel from the boot, remove the centre-side coverings and when operating on the right-hand suspension strut, take off the fuel recovering tank from its support bracket, then remove nuts "A" from inside the car and the nuts "B" from the boot (See Fig. 02 2/15).

Refitting

— Refit the suspension strut to the turret in the body shell and to the stub shaft and lock the nuts (A, B in Fig. 07 2/15) to the torque loading prescribed on the sheet DT-Beta-07/0010 with the use of the torque spanner 88091134, socket 88091214 and extension 88091203.
— On the Coupe: refit the suspension strut to the turret in the body shell and to the stub shaft. Tighten the nuts "A" and "B" shown in Fig. 07 2/15 from inside the boot to the torque loading stated on the sheet DT-Beta-07/0010 and with the use of the torque spanner 88091134, spanner 88021409 and socket 88091214. On the right-hand side, remove the dome lamp, disconnect the electric cables, take off the seat backrests and the back board, then lock the nuts "A" (See Fig. 07 2/15) from inside the car and the nuts "B" from inside the boot to the torque loading and using the tools above.
— Fit the upper bolt (Ref. 4 in Fig. 07 2/14) which secures the strut to the stub shaft and tighten the nut to the loading prescribed on the sheet DT-Beta-07/0010, using the spanner 88021408.
— Refit the transverse links to the stub shaft by fitting the lower bolt (Ref. 4 in Fig. 07 2/14) and washers, then screw-in the nut but do not lock it.
— Apply the fixture 88033413 and load the suspension as far as the dimension "T" shown in Fig. 07 2/14 and stated on the sheet DT-Beta-07/0040 is obtained, by gauging it with the use of tool 88035420. The dimension "T" refers to 284.5 mm. for the Saloon and 290.5 mm. for the Coupe.
— Lock the transverse links-to-stub shaft fixing bolt to the torque loading prescribed on the sheet DT-Beta-07/0010 and with the use of the spanner 88021408.
— Remove the fixtures 88033412 and 88033413.
— Refit the parts removed to the car interior and to the boot.

TOOLS REQUIRED

— Spanners, 13 mm. (88091247), 19 mm. (88091250).
— Sockets, 13 mm. (88091214), 17 mm. (88091218).
— Cranked ring spanner, 19 mm. (88091407).
— 88021408 — Spanner to lock the suspension strut mounting bolts.
— 88021409 — Spanner to lock the suspension strut mounting nuts.
— 88033412 — Fixture to retain the stabilizer bar.
— 88033413 — Fixture to pre-load the rear suspension trim.
— 88091203 — Extension for socket.
— 88091134 } Torque spanners.
— 88091135 }
— 88097827 — Hydraulic jack attachment.

SAT SHEETS MENTIONED

— DT-Beta-07/0010 — Torque loading.
— DT-Beta-07/0040 — Dimensions to lock silent blocks and buffers.

§ 07 2 2600

REMOVING AND REFITTING THE REAR SUSPENSION TRANSVERSE LINKS
(See Fig. 07 2/16)

After driving the car on the pit, please *proceed as follows*:

Removing

— Remove the hub caps and loosen the bolts which secure the rear road wheels.

In the pit:

— Jack up the rear end of the car with the use of an hydraulic jack and attachment 88097827 and rest it on the stands 88097120.
— Remove the guard (11) from the crossmember (14) and remove the ball pin of the headlights automatic aiming sensor from the left-hand transverse link on the cars fitted with.
— Remove the nuts of the bolts (12-15) which secure the transverse links (13) to the crossmember (14) and stub shafts.
— Take off the road wheels.
— Remove the crossmember (14) from the bodywork and withdraw the transverse link inboard

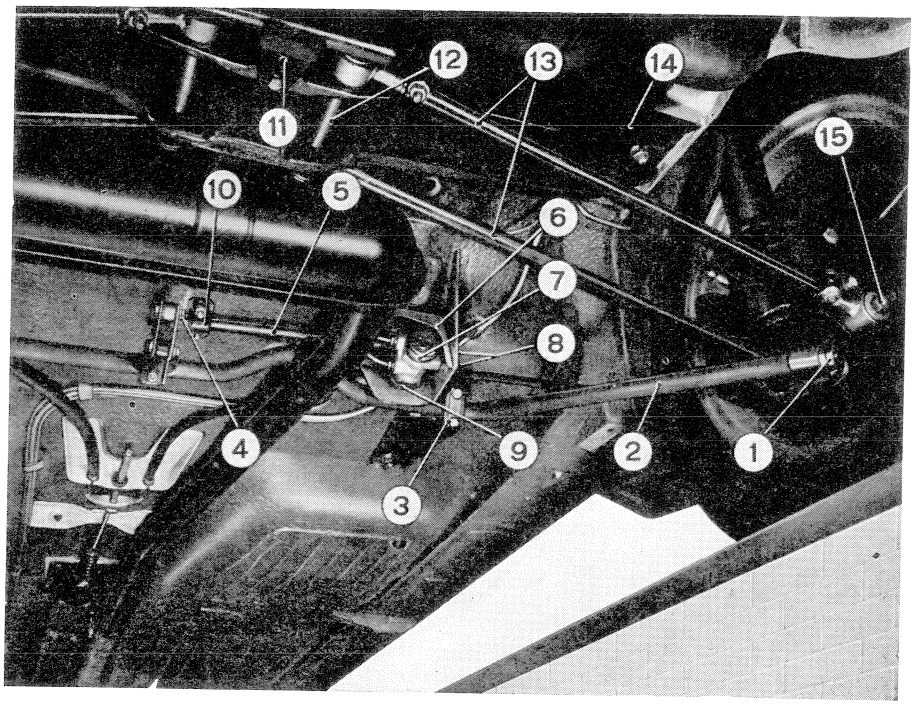

Fig. 07 2/16 - Rear Suspension

1. Stabilizer bar mounting nut - 2. Stabilizer bar - 3. Stabilizer bar support - 4. Brake limiting valve control rod shackle bar bolts - 5. Brake limiting valve control rod - 6. Support bracket - 7. Brake limiting valve - 8. Brake limiting valve mounting bolts - 9. Dust guard - 10. Brake limiting valve control rod mounting bracket - 11. Guard - 12. Transverse link bolt - 13. Transverse links - 14. Crossmember - 15. Transverse link bolt.

and outboard mounting bolts (12-15) and remove the transverse links, washers and spacers.

Refitting

— Refit the transverse links and secure with the spacers, washers and bolts to the stub shafts and crossmember.

Note - The bolts (12) must be fitted with the head forward as to the direction of motion of the car.

— Refit the crossmember (14) and lock the securing nuts to the torque loading stated on the sheet DT-Beta-07/0010.

— Apply the fixture 88033413 (See Fig. 07 2/10) and load the rear suspension to the dimension "T" prescribed on the sheet DT-Beta-07/0040 and gauged using tool 88035420.

— Tighten the nuts of the bolts (12-15) to the torque loading stated on the sheet DT-Beta-07/0010.

— Fit the guard (11) to the crossmember and the headlamp aiming system ball pin to the transverse link.

— Fit the road wheels and lock the bolts to the value specified on the sheet DT-Beta-08/0010. Complete the operation by checking and setting the road wheel toe-in, if required, as instructed under § 08 2 0600.

TOOLS REQUIRED

— Hammer — Screwdriver.
— Spanners, 10 mm. (88091316), 19 mm. (88091325).
— Open and ring ended spanner, 17 mm. (88091377).
— 88021408— Spanner to tighten the transverse link mounting bolts.
— 88033413 — Fixture to load the rear suspension.
— 88035420 — Tool to gauge the rear suspension trim.
— 88091135 — Torque spanner.

SAT SHEETS MENTIONED

— DT-Beta-07/0010 — Torque loadings.
— DT-Beta-07/0040 — Dimensions to lock the silents blocks and buffers.
— DT-Beta-08/0010 — Torque loadings.