tion to the flexible coupling. Instal but do not tighten the clamp bolt at this stage.

(3) Raise the steering gear to the correct position, instal the mounting brackets and instal and tighten the retaining bolts to the specified torque.

(4) Tighten the clamp bolt retaining the flexible coupling to the pinion shaft to the specified torque.

(5) Instal the tie rod ends to their respective steering arms and tighten the castellated nuts to the specified torque. Instal new split pins to prevent the castellated nuts from loosening during service.

(6) Instal the road wheels and lower the vehicle to the ground.

(7) Check and if necessary adjust the front wheel toe in as described in the Front Suspension section.

TO DISMANTLE

(1) Thoroughly clean the outer surfaces of the steering gear in a suitable cleaning solvent.

(2) Mount the steering gear in a vice fitted with protective jaw plates.

(3) Loosen the clamp bolts and unscrew the tie rod ball joints from the tie rods. Count and note the number of turns necessary to unscrew each tie rod ball joint to ensure correct assembly.

(4) Release the rubber boot retaining clips at the steering gear housing, then detach the boots from the assembly by sliding them over the tie rods.

(5) Using a suitable drift and hammer, tap the tie rod ball end lock tabs away from the shoulder of the tie rod ball end.

(6) Using the machined flats on both the rack and tie rod ball ends, unscrew the tie rod ball ends from the rack with the aid of suitable spanners.

(7) Loosen the locknut, remove the adjusting plug from the housing and withdraw the damper and spring from the housing.

(8) Align the cutaway in the rack with the pinion shaft, loosen the pinion shaft adjustment locknut, remove the adjusting ring and withdraw the pinion shaft from the housing.

NOTE: If difficulty is incurred withdrawing the pinion shaft, firmly grasp the pinion shaft with a pair of pliers and pull the pinion shaft outwards whilst tapping the steering gear housing with a soft faced hammer in the opposite direction.

(9) Withdraw the rack from the pinion end of the housing to avoid damaging the rack bush.

(10) If it is necessary to renew the lower pinion bearing, heat the housing to 80°C and tap the housing with a soft faced hammer to remove the bearing.

TO CLEAN AND INSPECT

(1) Wash all components thoroughly in a suitable solvent and blow dry with compressed air.

(2) Inspect the pinion shaft seals and bearings for deterioration or damage.

(3) Examine the pinion and rack for correct tooth contact, wear or damage.

(4) Check the bearings for roughness in operation and corrosion.

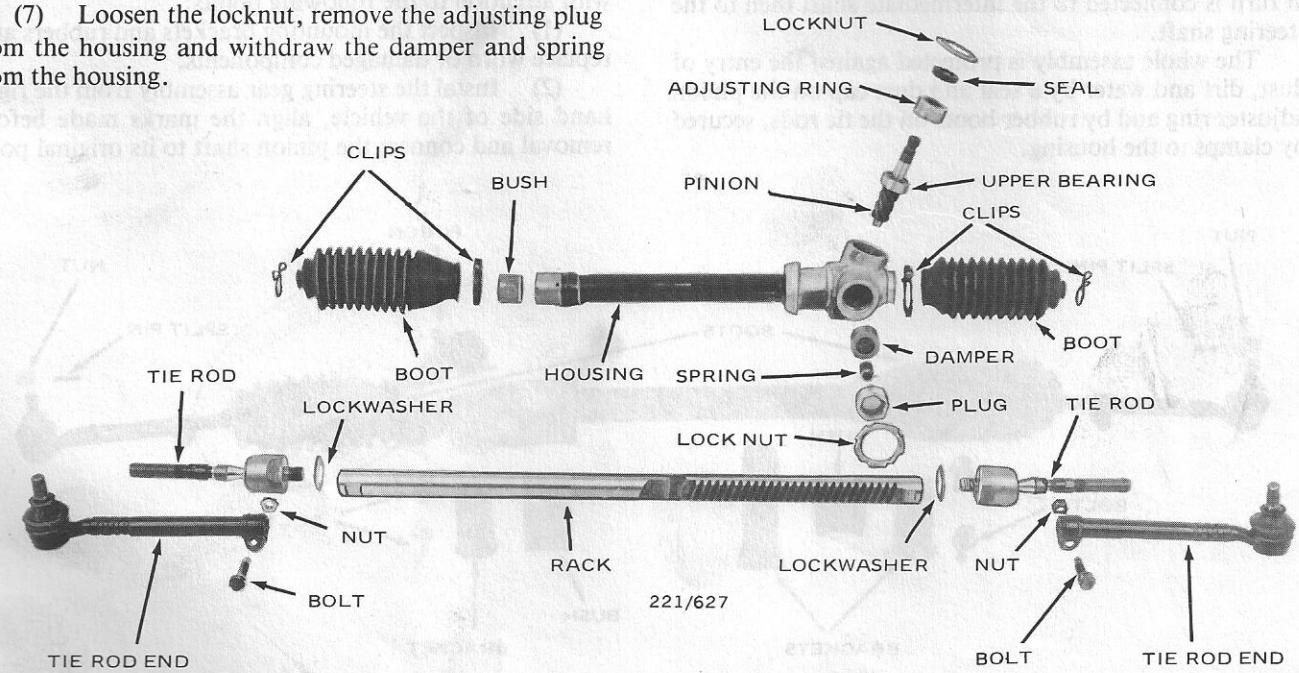
(5) Check the rack bush for scoring or wear.

(6) Examine the tie rod inner and outer ball joints for smoothness in operation and loose fitting.

(7) Inspect the damper for wear and the spring for distortion and loss of tension.

(8) Inspect the housing for straightness, wear and damage.

(9) Renew all components which are found to be unserviceable.



Dismantled view of steering gear.

TO ASSEMBLE

Assembly is a reversal of the dismantling procedure with attention to the following points:

(1) Generously apply molybdenum disulphide grease to the sliding surface of the steering rack and to the pinion bearings. Instal the rack into the housing and align the cutaway with the pinion lower bearing.

(2) Lubricate the pinion with the recommended grease and instal the pinion into the housing. Slide the rack to engage the pinion and centralise the rack in the housing.

(3) Lubricate a new pinion shaft seal and instal into the housing with the lip facing inwards.

(4) With the rack still in the central position instal and tighten the pinion preload adjusting plug until the pinion turning torque, measured with a special small tension wrench and adaptor, reaches Specifications.

NOTE: To check the pinion turning torque a special tension wrench with low torque capabilities should be used.

(5) Apply sealant to the adjusting plug locknut, instal and tighten the locknut and recheck the turning torque. Instal the pinion shaft dust seal.

(6) Apply grease to the damper, instal the damper and spring into the housing then instal and tighten the adjusting plug until the total pinion turning torque reaches Specifications.

(7) Apply sealant to the damper adjusting plug locknut, instal and tighten the locknut and check the total pinion turning torque.

(8) Instal new lock tab washers to the tie rod inner ball ends, tighten to Specifications and stake the locktabs using a suitable drift.

(9) Generously apply grease to the ball ends and the insides of the rack boots, instal the boots to the steering gear and instal and tighten the inner boot clamps.

(10) Align the marks which are moulded into the rubber boots and instal and tighten the outer boot clamps.

(11) Instal the tie rod ends the same number of turns as noted on dismantling and tighten the clamp bolts.

(12) Instal the mounting rubbers and brackets to the steering gear assembly and instal the steering gear to the vehicle as previously described.

(13) Check and if necessary, adjust the toe in as described in the Front Suspension section.

3. STEERING COLUMN ASSEMBLY

Special Equipment Required:

To Remove Steering Wheel – Suitable steering wheel puller

TO REMOVE AND INSTAL

NOTE: It is not necessary to remove the steering column when overhauling the ignition lock and housing. Follow the appropriate steps as described in To Dismantle and Assemble.

(1) Disconnect the negative battery terminal.

(2) Mark the flexible coupling and the intermediate shaft with quick drying paint to aid assembly and remove the clamp bolt.

(3) Working inside the vehicle, centralise the steering wheel, insert a small screwdriver at the base of the steering wheel escutcheon, lever the escutcheon upwards and remove the escutcheon plate from the steering wheel.

(4) Remove the steering wheel retaining nut and washer. Suitably mark the steering shaft and the steering wheel boss with quick drying paint to aid assembly and using a puller, remove the steering wheel.

NOTE: It is imperative that a puller be used as a sharp blow can cause irrepairable damage to the steering column.

(5) Remove the screws retaining the lower facia panel and remove the facia panel.

(6) Remove the shroud retaining screws and remove the lower shroud from the column.

(7) Disconnect the electrical connectors to the combination switch and ignition switch.

(8) Manoeuvre the floor covering away from the bottom of the steering column and remove the bolts retaining the steering column lower mounting to the floor.

(9) Remove the bolts retaining the mounting bracket to the dash, lower the column and remove the upper shroud.

(10) Withdraw the steering column to disconnect the intermediate shaft from the flexible coupling and remove the steering column from the vehicle.

Installation is a reversal of the removal procedure with attention to the following points:

(1) Coat the rubber gasket positioned between the lower mounting and the floor with a suitable sealant before installing the column.

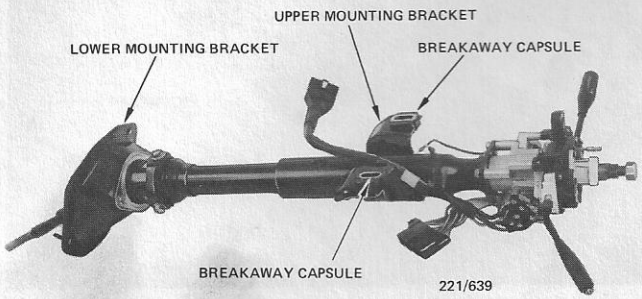
(2) When installing the intermediate shaft to the flexible coupling, align the marks made on removal.

TO DISMANTLE

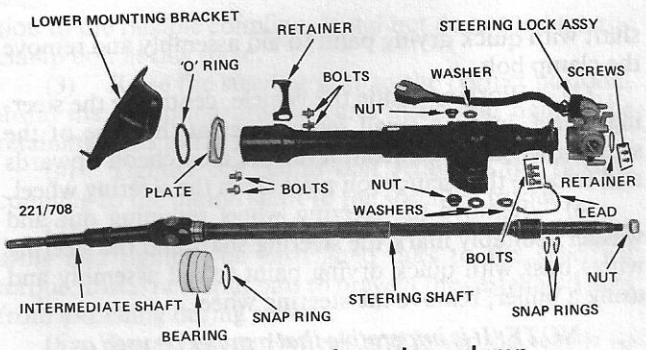
(1) Remove the steering column assembly as previously described.

(2) Remove the screws retaining the combination switch to the column and withdraw the switch from the column.

(3) Turn the ignition switch to the on position, remove the screws securing the upper bearing retainer, remove the retainer and remove the snap ring from the steering shaft. Remove the bolts securing the steering lock assembly to the steering column, withdraw the steering



Steering column removed from vehicle.



Dismantled view of steering column.

lock assembly from the steering shaft and remove the lower snap ring.

(4) Remove the upper mounting bracket from the steering column.

(5) Remove the bolts retaining the cover plate to the lower mounting bracket and withdraw the bracket from the column. Remove the 'O' ring, align the cutaway and remove the cover plate from the column.

(6) Remove the bolts securing the lower bearing retainer to the steering column, remove the retainer and withdraw the steering shaft from the steering column.

TO INSPECT

(1) Check the lower support bearing on the steering shaft for wear and damage. Check for looseness in the column, repack with grease and renew faulty components.

(2) Check the steering shaft for damage or bend, check the steering shaft universal joint for wear and check the shear pin for damage.

(3) Check the upper support bearing for wear and looseness in the steering lock assembly and repack with grease. Check the steering lock mechanism for correct operation and renew faulty components as necessary.

TO ASSEMBLE

Assembly is a reversal of the dismantling procedure with attention to the following points:

(1) Assemble the steering shaft into the steering column ensuring that the shaft is not bumped, instal the lower bearing retainer and instal and tighten the retaining bolts.

(2) Instal the lower snap ring onto the steering shaft, instal the steering lock assembly onto the shaft and instal the upper snap ring onto the steering shaft.

(3) Instal and tighten the bolts retaining the steering column to the steering lock assembly, instal the bearing retainer and instal and tighten the bearing retainer securing screws.

(4) Align the cover plate cutaway with the pawl on the steering column and assemble the cover plate on the steering column. Instal the 'O' ring, instal the lower support then instal and tighten the retaining bolts.

(5) Instal the combination switch to the steering column and instal and tighten the retaining screws.

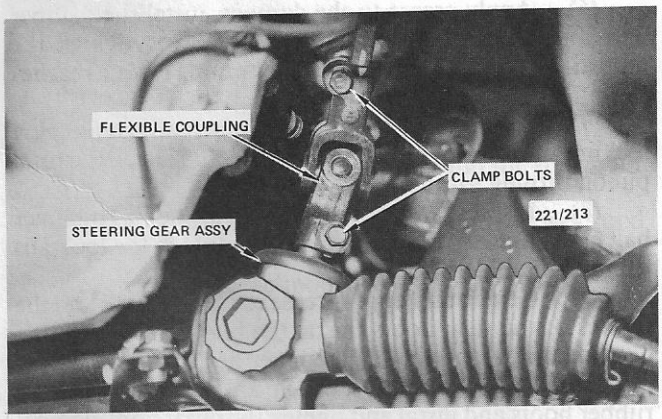
(6) Instal the upper mounting bracket to the steering column and instal and tighten the retaining bolts.

(7) Instal the steering column to the vehicle as previously described.

4. FLEXIBLE COUPLING

(1) Mark the splines on the steering gear, the flexible coupling and the intermediate shaft to aid assembly.

(2) Remove the clamp bolts from the steering gear side and the intermediate shaft side of the flexible coupling.



Installed view of flexible coupling.

(3) Slide the coupling off the pinion shaft on the steering gear side then off the intermediate shaft.

NOTE: If difficulty is encounted disconnecting the flexible coupling, remove the steering gear mounting bolts and pull the steering gear forward to gain extra clearance.

Assembly is a reversal of the removal procedure.

PART 3. POWER STEERING

SPECIFICATIONS

Type	Rack and pinion
Steering column type	Collapsable
Steering wheel turning effort	Less than 4 kg
Pump drive belt deflection	* 8–12 mm

* Measured midway between the pulleys

TORQUE WRENCH SETTINGS

Steering wheel nut	40 Nm
Tie rod end clamp bolt	20 Nm
Tie rod end nut	70 Nm
Steering gear mounting bolts	45 Nm
Flexible coupling clamp bolt	38 Nm
Steering column to dash bolts	45 Nm

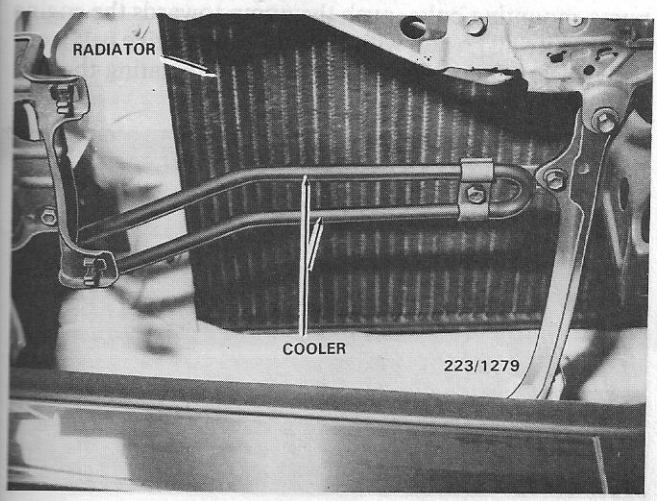
1. DESCRIPTION

The power steering is a rack and pinion type with an integrated power cylinder and a rotary valve which directs oil to the appropriate side of the piston in the power cylinder. This hydraulic pressure assists the mechanical parts which operate in a similar manner to a rack and pinion system.

Hydraulic pressure is supplied to the rack and pinion by a pump which is belt driven from the engine crankshaft pulley. An oil reservoir is located on the left hand inner fender in the engine compartment. An oil cooler pipe is mounted in the air stream in front of the radiator.

No lubrication of the steering gear is required in service and in the event of a loss of power assistance the steering will continue to operate manually but with greatly increased effort.

The steering column is designed to collapse in the event of a severe front end collision and is connected to the steering gear by a flexible coupling.



Installed view of the power steering oil cooler.

2. PRELIMINARY INSPECTION AND TESTING

If the power steering system becomes partially or fully inoperative it is most important that the following preliminary inspection and testing procedure be performed prior to undertaking any trouble shooting or repair operations.

PUMP DRIVE BELT

Inspect the pump drive belt for breakage, glazing or wear. If any of these characteristics are evident then renew the belt using only a genuine replacement of the same type.

If the belt is loose but still serviceable then adjust it using the procedure as outlined under In Car Adjustment and Minor Repairs.

NOTE: In most cases a loose drive belt can be heard squealing when a load is placed on the pump; when the steering wheel is turned or as the engine is revved.

TO CHECK FLUID LEVEL

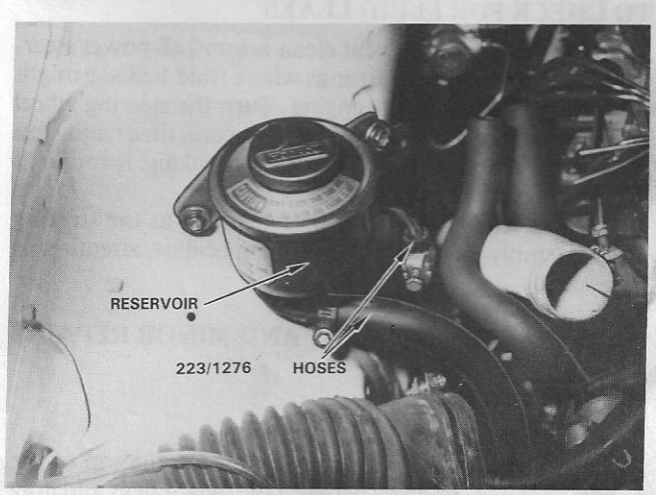
The power steering reservoir dipstick has level marks for both hot and cold checks. When the oil is cold the level must be within the range marked Cold. When the oil is hot the level must be within the range marked Hot.

(1) Make sure the vehicle is level.

(2) Clean around the filler neck of the reservoir to prevent dirt falling into the reservoir when the dipstick is removed.

(3) Remove the dipstick and check that the level is within the relevant range.

(4) Add the recommended fluid if necessary. Refer to the Lubrication and Maintenance section for the correct type of fluid. Do not overfill.



Installed view of steering fluid reservoir.

FRONT SUSPENSION

SPECIFICATIONS

Type	Independent, McPherson strut type with coil spring
Toe in:	
Radial tyres	4 ± 1 mm
Bias tyres	6 ± 1 mm
Camber	1 deg 05 min ± 30 min
Caster	3 deg 25 min ± 30 min
King pin inclination	9 deg 10 min ± 30 min
Side slip (max)	3.0 mm/m
Ball joint vertical play (max)	2.5 mm
Hub axial play (max)	0.05 mm

TORQUE WRENCH SETTINGS

Piston rod nut	52 Nm
Suspension control arm pivot bolt nut	87 Nm
Ball joint stud nut	87 Nm
Radius rod to radius rod bracket	106 Nm
Radius rod bracket to body	47 Nm
Tie rod end nuts	68 Nm
Radius rod to suspension control arm	72 Nm
Stabiliser bar to suspension control arm	20 Nm
Stabiliser bar bracket to radius rod bracket	20 Nm
Suspension unit upper mounting to body nuts	43 Nm
Suspension unit to steering arm bolts	116 Nm

1. FRONT SUSPENSION TROUBLE SHOOTING

FRONT END NOISE

(1) Loose upper suspension mounting or piston rod nuts: Tighten mounting and/or piston rod nuts.

(2) Loose or worn control arm ball joints: Tighten or renew ball joints.

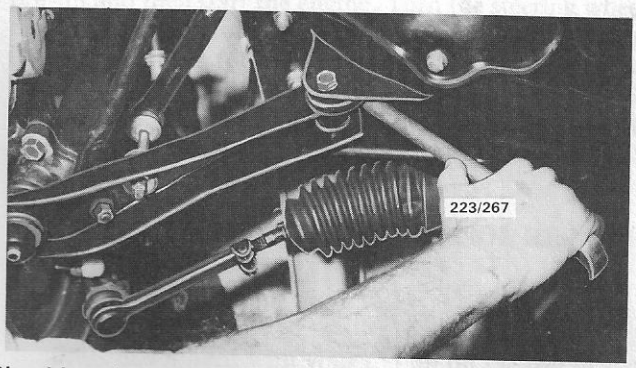
(3) Noise in suspension units: Renew suspension units.

(4) Worn steering gear: Renew defective components.

(5) Incorrectly adjusted front hub bearings: Adjust hub bearings.

(6) Loose or defective stabiliser bar mountings: Check, tighten or renew mounting rubbers.

(7) Loose or defective radius rod mounting: Check, tighten or renew mounting.



Checking the control arm inner pivot bushes for wear using a lever.

NOTE: To check the front suspension components for wear, first raise the front of the vehicle, support on chassis stands and allow both front wheels and suspension units to hang free. With an assistant pushing and pulling the front road wheels in and out at the top and then at the bottom, check for excessive looseness in the front hub bearings, control arm ball joints and inner pivot bushes. The inner pivot bushes may also be checked using a lever. To check the radius rod front mounting bushes, have the assistant push the wheel firmly towards the rear and then towards the front of the vehicle. Stabiliser bar mounting rubbers can be visually checked for damage or deterioration.

POOR OR ERRATIC ROAD HOLDING ABILITY

(1) Low or uneven tyre pressures: Inflate tyres to recommended pressures.

(2) Defective suspension unit: Renew faulty unit, preferably in pairs.

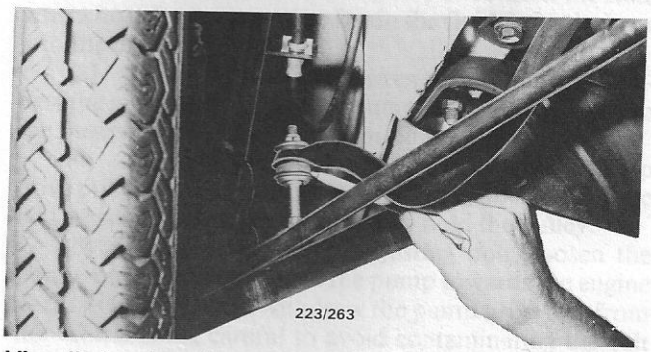
(3) Incorrect front end alignment: Check and adjust alignment as necessary.

(4) Loose or defective stabiliser bar mounting rubbers: Check and tighten or renew mounting rubbers.

(5) Weak or broken front coil spring: Renew front coil spring, preferably in pairs.

(6) Broken or weak rear spring: Renew rear spring, preferably in pairs.

(7) Loose or defective radius rod mounting: Check, tighten or renew mounting.



Visually inspect the stabiliser bar rubbers for wear and deterioration.

NOTE: As a quick guide to suspension unit condition, bounce the front of the vehicle up and down (one side at a time) and observe that the vehicle comes to rest in a single movement. If it bounces two or three times before stopping, the suspension unit should be renewed. If the front of the vehicle is laying down further on one side than the other, remove the coil spring and check its free length against a new spring. If the spring is found to be unserviceable it is good practice to fit two new springs as a matching pair. This also applies to the springs on the rear of the vehicle.

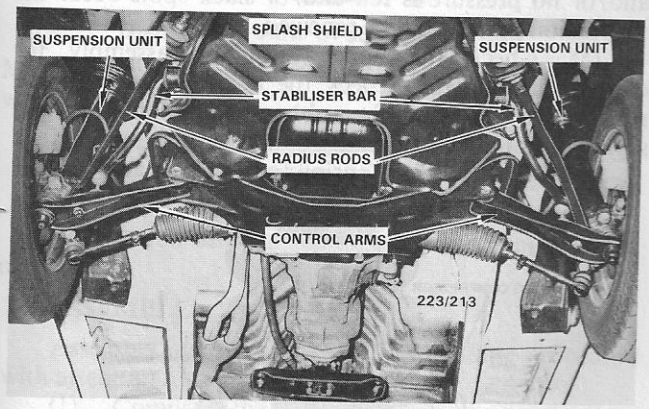
2. DESCRIPTION

Each front suspension unit comprises a vertical tubular strut and shock absorber unit surrounded at the upper end by a coil spring, in the top of which is an upper mounting attached to the underside of the front wheel housing.

The piston rod of the shock absorber is in turn attached to the upper centre of the spring upper mounting by a rubber mounted thrust bearing assembly. The suspension unit foot, integral with the stub axle, is part of the lower end of the strut and shock absorber tube. The steering arm, to which the ball joint is connected by its stud, is attached to the suspension unit foot by two bolts. The ball joint bolt attaches the suspension control arm, which pivots at its inner end on a pivot bolt and rubber bush, to the suspension crossmember.

A stabiliser bar, attached to the radius rod mounting bracket forward of the suspension and connected to each control arm by a link bolt and rubber bushes, contributes considerably to the riding qualities of the front suspension units. In order to maintain the control arm in correct relationship with the other suspension components in service, a radius rod is mounted between the control arm and the radius rod mounting bracket.

Camber and king pin inclination are set in production and cannot be adjusted. Any variations in these angles will be caused by worn or damaged components. Caster can be adjusted by the nuts on the front of the radius rod.



Underbody view of the vehicle.

3. FRONT HUB

TO REMOVE AND DISMANTLE

(1) Raise the front of the vehicle, support it on chassis stands and remove the road wheel.

(2) Remove the disc brake caliper mounting bolts and remove the caliper from the suspension unit. Suspend the caliper with a cord or wire to avoid damage to the brake hose.

(3) Remove the grease cap, split pin, retainer and nut from the front hub assembly.

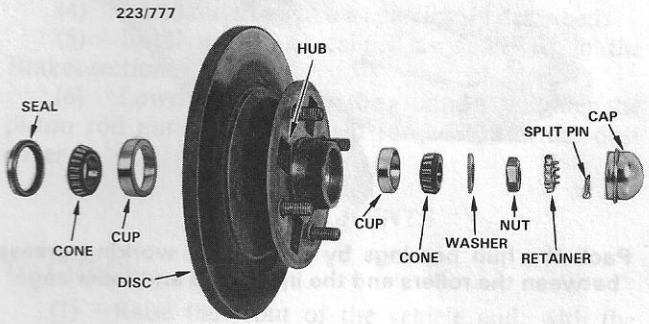
(4) Withdraw the hub and disc together with the outer bearing and thrust washer from the stub axle being careful not to drop the outer bearing.

(5) Using a suitable large screwdriver pry out the oil seal from the hub.

(6) Remove the inner bearing cone from the hub.

(7) Where necessary, suitably support the hub assembly and using a soft drift tap the inner and outer bearing cups out of the hub.

NOTE: It is only necessary to carry out operation (7) when the bearings are to be renewed.



Dismantled view of the front hub components.

TO CLEAN AND INSPECT

(1) Remove all the old grease and thoroughly wash all the components in a cleaning solvent.

NOTE: Do not spin the bearing cones with compressed air as damage to the bearings and/or operator may result.

(2) Inspect the stub axle for cracks, flaws and wear and check the thread for damage.

(3) Inspect the bearing cups, cone rollers and cone inner race for pitting, cracks and discoloration due to heat. Inspect the roller cage for wear and cracks and discard any bearings that are damaged. If any part of a bearing is faulty, the complete bearing should be renewed.

TO ASSEMBLE AND INSTAL

Assembly and installation is a reversal of the removal and dismantling procedure with attention to the following points:

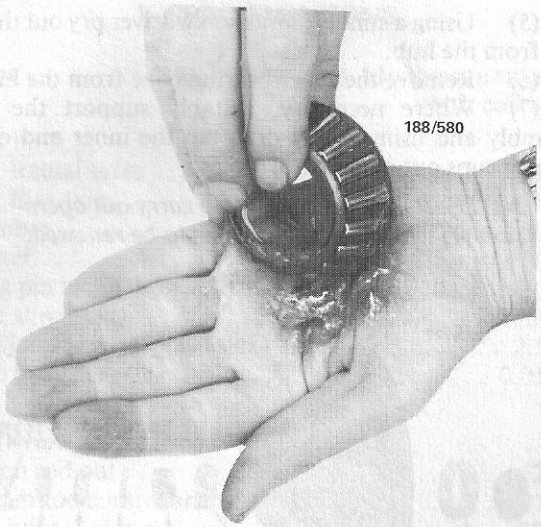
(1) Using a soft drift, instal the inner and outer bearing cups in the hub with their tapers opposed to each other, facing out.

(2) Pack the cavity in the hub between the two bearing cups with high melting point grease and pack the bearing cones by thoroughly working grease between the rollers, inner race and roller cage, being careful to avoid contaminating the brake disc with grease.

(3) Instal the inner bearing cone into position in the hub. Place a new seal in the inner end of the hub with the lip facing in and tap the seal into position.

(4) Instal the hub assembly onto the stub axle and position the outer bearing in the outer end of the hub.

(5) Instal the thrust washer and nut, and torque the nut to 30 Nm.



Pack the hub bearings by thoroughly working grease between the rollers and the inner race and roller cage.

(6) Rotate the hub back and forth two or three times to seat the bearings and retorque the nut.

(7) Loosen the nut until it can be turned by hand using a socket on the nut, tighten the nut by hand until a slight drag is felt on the disc.

(8) Instal the nut retainer and split pin. If the pin hole does not line up, correct by tightening the nut the smallest amount possible then check that the hub axial play is within limits.

(9) Instal the brake disc caliper. Torque the mounting bolts to the specified torque.

(10) Instal the road wheel and lower the vehicle to the ground.

4. SUSPENSION UNIT

Special Equipment Required:

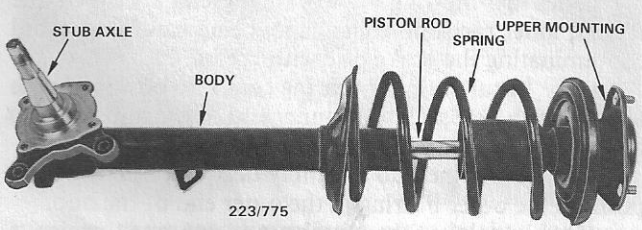
To Dismantle and Assemble — Spring compressor

TO REMOVE

(1) Raise the front of the vehicle and support on chassis stands underneath the body. Remove the road wheel.

(2) Remove the brake caliper as described in the Brakes section.

(3) Remove the front hub as previously described.



Assembled view of the suspension unit.

(4) Remove the bolts retaining the brake backing plate and withdraw the backing plate from the suspension unit.

(5) Open the bonnet and remove the three nuts retaining the suspension unit to the body. Remove the dust cover and loosen the piston nut half a turn.

(6) Remove the two bolts retaining the steering arm to the suspension unit foot.

(7) Holding the suspension unit tube, pry down the lower control arm until the collars on the steering arm bolt holes are clear of the suspension unit foot, then lift out the suspension unit.

TO DISMANTLE

(1) Prior to dismantling the suspension unit, clean it thoroughly and ensure that a clean working area is available.

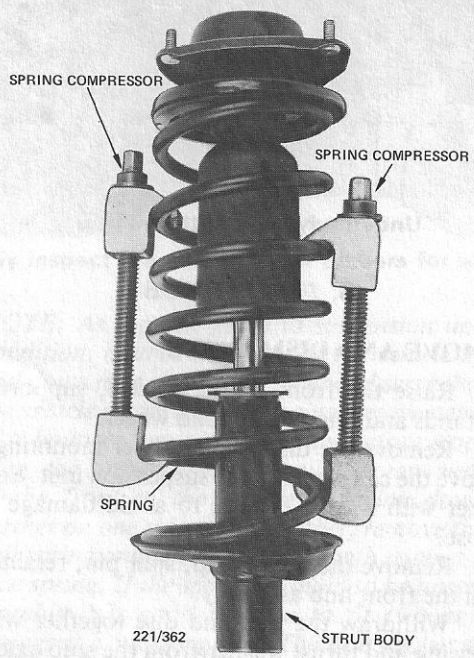
(2) Attach the spring compressor and compress the coil spring. Remove the piston rod nut from the piston rod.

(3) Remove the upper mounting, dust seal, spring seat with spring seat rubber, coil spring and bump rubber from the top of the suspension unit.

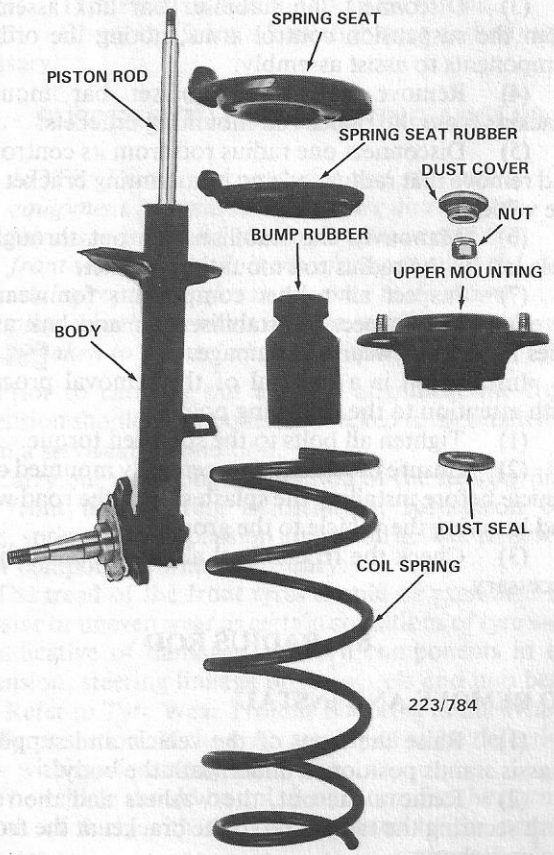
(4) Check the hydraulic operation of the shock absorber. With the strut assembly vertical, move the piston rod up and down several times. A firm pressure with no slack spots should be evident in both directions, at the same time check for fluid leakage. If leakage is evident and/or no pressure is felt and/or slack spots occur the suspension unit should be renewed.

(5) Check the upper mounting assembly for damage and fatigue. Check the bearing for wear and roughness. Check all the rubber components and the spring seats for wear, damage and deterioration.

(6) Check the coil spring for cracking and fatigue.



Suspension unit with spring compressor installed.



Dismantled view of suspension unit.

Measure the free length of the coil spring and compare with a new spring.

NOTE: If one spring is found to be unserviceable, it is good practice to instal two new coil springs as a matching pair.

(7) Renew all worn and defective components as necessary.

TO ASSEMBLE

Assembly is a reversal of the dismantling procedure with attention to the following points:

(1) Compress the coil spring with the spring compressor and fit it over the fully extended piston rod followed by the bump rubber, the spring seat and rubber, the dust seal and the upper mounting.

(2) Fit a new self locking piston rod nut and tighten the nut as much as possible.

NOTE: Do not attempt to hold the piston rod with Stillsons or vice grip pliers while tightening the piston rod nut.

(3) Carefully release the spring compressor ensuring that the spring is correctly seated.

TO INSTAL

Installation is a reversal of the removal procedure with attention to the following points:

(1) Working below the front fender, place the suspension unit in position and align the studs on the upper mounting with the stud holes in the body. Instal and tighten the three upper retaining nuts to the specified torque.

(2) Push down the lower control arm and align the bolt holes in the steering arm with the bolt holes in the foot of the suspension unit. Apply a suitable sealant to both mating surfaces and instal and tighten the two retaining bolts to Specifications.

(3) Instal the brake backing plate onto the suspension unit and tighten the retaining bolts.

(4) Instal the front hub as previously described.

(5) Instal the brake caliper as described in the Brakes section.

(6) Lower the vehicle to the ground and tighten the piston rod nut to the specified torque. Instal the dust cover.

5. BALL JOINTS

TO CHECK

(1) Raise the front of the vehicle and, with the wheels in the straight ahead position, place wooden blocks 180–200 mm thick under the road wheel.

(2) Lower the jack until there is approximately half the load of the vehicle on the front coil springs. Instal chassis stands under the body.

(3) Lever the lower suspension control arm up and down and check that the vertical play is within the specified limit. If the vertical play is excessive the ball joint must be renewed with the suspension control arm as an assembly.

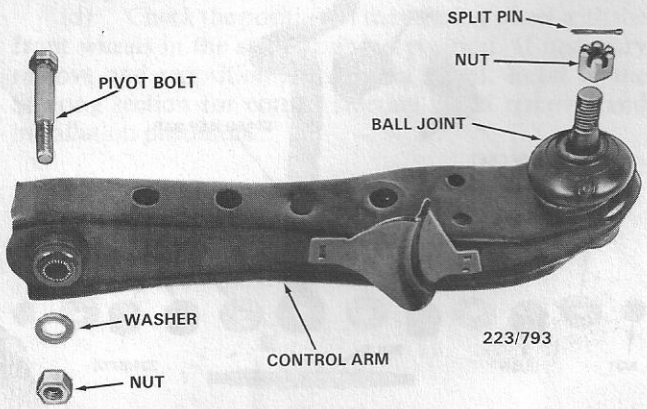
6. SUSPENSION CONTROL ARM

TO REMOVE AND INSTAL

(1) Raise the front of the vehicle and support on chassis stands under the body. Remove the road wheel.

(2) Disconnect the tie rod end from the steering arm by removing the split pin and nut from the tie rod end stud then, holding a hammer or suitable dolly against one side of the steering arm, strike the other side with a hammer.

(3) Remove the two bolts securing the steering arm to the foot of the suspension unit.



Dismantled view of the control arm.

(4) Remove the stabiliser bar link assembly retaining nut, washers and rubbers, being careful to note the order of the components as they are removed to assist assembly.

(5) Remove the bolts holding the radius rod to the control arm and disconnect the radius rod.

(6) Remove the pivot bolt connecting the control arm to the suspension crossmember and remove the control arm from the vehicle.

(7) Remove the split pin and nut from the ball joint stud and disconnect the steering arm from the ball joint by holding a hammer or suitable dolly against one side of the steering arm and striking the other side with a hammer.

(8) Inspect the ball joint for looseness, wear and damage. Inspect the control arm for distortion, cracks and fatigue.

(9) Inspect the pivot bush for damage and wear.

NOTE: Special equipment is required to renew the pivot bush. If these special tools are not used in the removal and replacement of the bush, serious distortion of the control arm may occur. For this reason the control arm should be taken to a reliable workshop for the renewal of the bush.

Installation is a reversal of the removal procedure with attention to the following points:

(1) Tighten all bolts to the specified torque and instal new split pins securing the tie rod end nut and the ball joint stud nut.

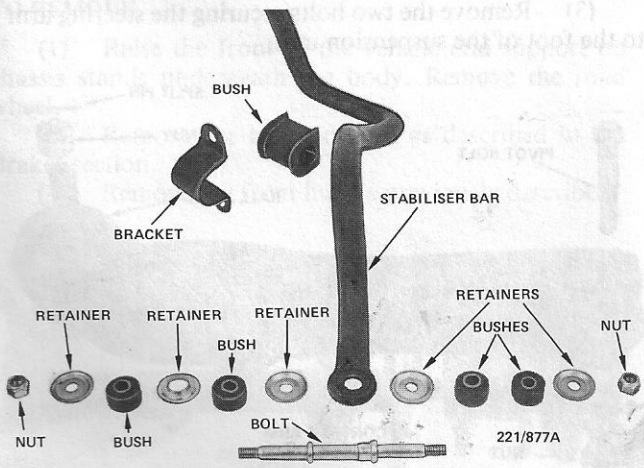
(2) Leave the pivot bolt nut loose until the weight of the vehicle is on the road wheels, then tighten the nut to the specified torque.

7. STABILISER BAR

TO REMOVE AND INSTAL

(1) Raise the front of the vehicle and support on chassis stands placed underneath the body. Remove both front road wheels.

(2) Remove the engine splash shield from under the front of the vehicle.



Dismantled view of front stabiliser bar components.

(3) Disconnect the stabiliser bar link assemblies from the suspension control arms, noting the order of components to assist assembly.

(4) Remove both the stabiliser bar mounting brackets from the radius rod mounting brackets.

(5) Disconnect one radius rod from its control arm and remove that radius rod and its mounting bracket from the vehicle.

(6) Manouvre the stabiliser bar out through the hole left by the radius rod mounting bracket.

(7) Inspect all rubber components for wear and deterioration. Inspect the stabiliser bar and link assemblies for cracks, wear and damage.

Installation is a reversal of the removal procedure with attention to the following points:

(1) Tighten all bolts to the specified torque.

(2) Ensure the stabiliser is centrally mounted on the vehicle before installing the splash shield, the road wheels and lowering the vehicle to the ground.

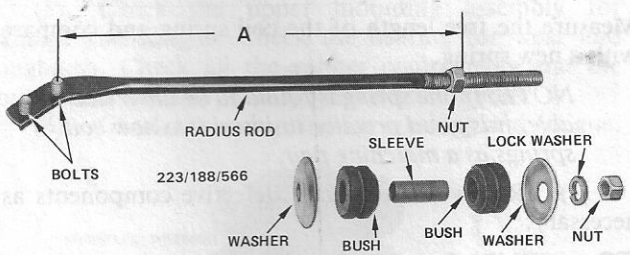
(3) Check the front wheel alignment and adjust if necessary.

8. RADIUS ROD

TO REMOVE AND INSTAL

(1) Raise the front of the vehicle and support on chassis stands positioned underneath the body.

(2) Remove the nut, the washers and the rubber bush securing the radius rod to the bracket at the front of the underbody.



Dismantled view of radius rod. Dimension A = 385.2 mm.

NOTE: The method of securing the nuts which hold the radius rod to its front mounting bracket differ from front to rear. The nut on the front of the bracket is secured by a spring washer while the nut at the rear is staked. Do not disturb this staked nut at this stage.

(3) Remove the nuts and bolts securing the radius rod to the suspension control arm and remove the radius rod from the vehicle.

(4) Inspect the radius rod for wear and damage and all rubber components for wear and deterioration.

(5) Check the distance from the front of the staked nut to the centre of the front bolt of the control arm securing bolts. It should be 385.2 mm. Adjust staked nut only if necessary.

Installation is a reversal of the removal procedure with attention to the following points:

(1) Tighten all nuts to the specified torque.
(2) Check the front wheel alignment and adjust if necessary.

9. SUSPENSION AND STEERING ANGLES

NOTE: Extensive knowledge and specialised equipment is required to measure and correct the suspension and steering angles except the front wheel toe in. It is therefore not a worthwhile proposition for the layman to do a complete wheel alignment and the vehicle should be taken to a wheel alignment specialist.

Prior to carrying out a wheel alignment the front suspension should be completely checked to ascertain that it is in a serviceable condition.

Carry out a thorough inspection of the steering linkage, front hub bearing adjustments, suspension ball joints, springs and suspension unit recoil action. Renew or repair components where necessary.

The tread of the front tyres should be examined for excessive or uneven wear as certain conditions of tyre wear are indicative of damaged or worn components in the suspension, steering linkage or the wheels and hub bearings. Refer to Tyre Wear Trouble Shooting in the Wheels and Tyres section. If the tyres are found to be defective, renew with serviceable tyres.

The vehicle should be unladen, except for the normal amount of fuel, with the tyres inflated to the normal pressures.

TO CHECK AND ADJUST TOE IN

(1) With the vehicle on a level floor, jack up the front of the vehicle and support on chassis stands.
(2) Spin each front wheel in turn and using a piece of chalk, mark a thin line around the periphery of each tyre as near to the centre as possible.
(3) Lower the front of the vehicle to the floor and bounce the vehicle up and down several times and let it find its own level. Set the front wheels in the straight ahead position.
(4) Mark the centre chalk line on both tyres in front of the suspension at the height of the wheel centres.
(5) Using a telescopic gauge or rule, measure and record the distance between the two marks on the tyre centres.
(6) Maintain the wheels in the straight ahead position, roll the vehicle forward until the marks are the same distance above the floor, but to the rear of the front suspension.

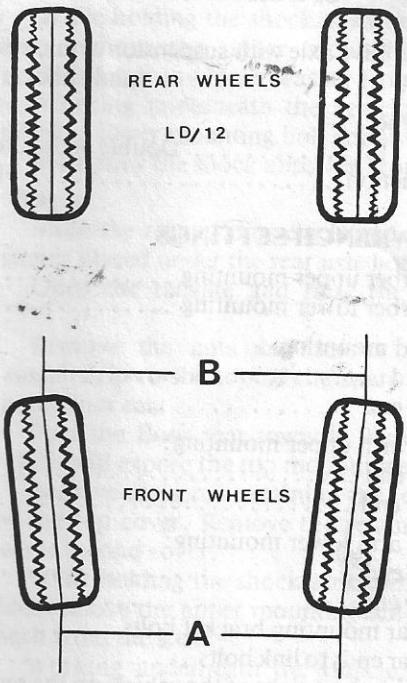


Diagram indicating front wheel toe-in. Distance A should be less than distance B.

(7) Again, use the telescopic gauge or rule to measure and record the distance between the marks on the tyres. The distance measured at the front of the wheels must be less than the measurement taken at the rear of the wheels. See Specifications for correct toe in setting.
(8) If adjustment of the toe in is required proceed as follows:
(a) Remove the outer clips from the rack boots and loosen the tie rod end clamp bolts.
(b) Adjust the tie rods as required until the correct toe in is reached.

NOTE: It is important to make equal adjustments to each tie rod to maintain the central position of the steering gear.

(c) Tighten the tie rod end clamp bolts and refit the outer clips to the rack boots.
(d) Check the position of the steering wheel with the front wheels in the straight ahead position. If necessary remove and reposition the steering wheel. Refer to the Steering section for correct steering wheel removal and installation procedure.

SPECIFICATIONS

Type ..... Live axle with suspension arms, coil springs and shock absorbers

Shock absorber:
- Type ..... Double acting, telescopic
- Construction ..... Hydraulic

TORQUE WRENCH SETTINGS

Shock absorber upper mounting	32 Nm
Shock absorber lower mounting	43 Nm
Panhard rod mounting:	
Axle end	74 Nm
* Body end	88 Nm
Suspension arm upper mounting:	
* Axle end	165 Nm
* Body end	146 Nm
Suspension arm lower mounting:	
* Axle end	165 Nm
* Body end	146 Nm
Stabiliser bar mounting bracket bolts	20 Nm
Stabiliser bar ends to link bolts	35 Nm

* Torque with the weight of the vehicle on the rear wheels.

1. REAR SUSPENSION TROUBLE SHOOTING

NOISE IN SUSPENSION

(1) Defective shock absorbers or mountings: Renew faulty components.

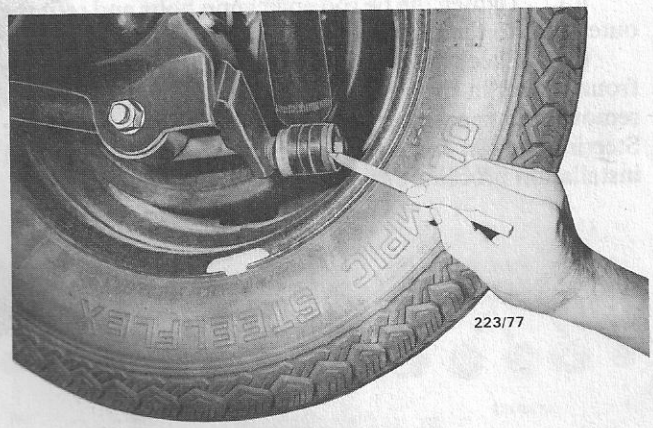
(2) Loose or worn suspension arm bushes or pivot bolts: Check and tighten or renew worn components.

(3) Broken coil spring: Renew coil spring.

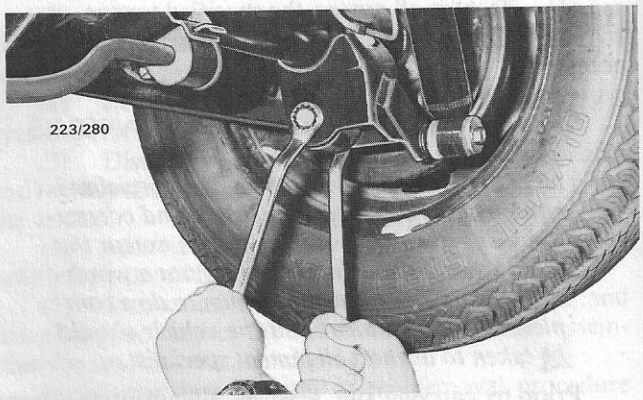
(4) Wheel and tyre assembly damaged or out of balance: Balance or renew wheel and tyre.

NOTE: As a quick guide to shock absorber condition, bounce the vehicle up and down (one side at a time) and observe if the vehicle comes to rest in a single movement. If the vehicle bounces two or three times before coming to rest the shock absorber is suspect. If suspect, remove the shock absorber and check for fractures or leaks.

To check the suspension arms, bushes or pivot bolts, insert a lever between the suspect unit and its mounting and lever the unit back and forth checking for excessive movement. Check the rear springs visually for breaks and check the spring seats for damage and distortion.



Check the shock absorber lower mounting rubber bushes for wear.



Checking the lower suspension arm rear mounting for tightness.

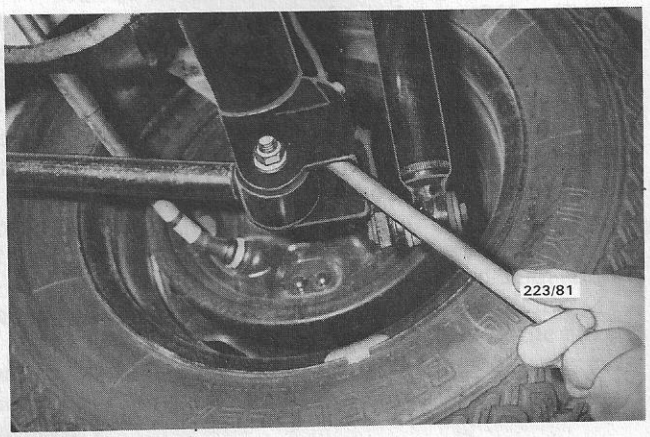
REAR WHEELS NOT IN ALIGNMENT WITH FRONT WHEELS

(1) Broken or badly worn suspension arm bolts or bushes: Renew faulty parts.

(2) Damaged or bent suspension arm: Renew faulty parts.

(3) Sprung or bent rear axle housing: Renew axle housing.

NOTE: To check this condition measure from the centre of the front wheels to the centre of the rear wheels on both sides. Compare the measurements which must be equal. Before measuring ensure that the front wheels are in the straight ahead position.



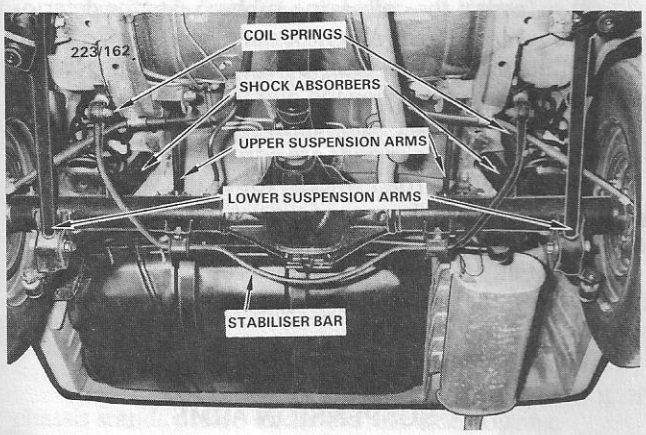
Checking the lower suspension arm rear mounting for wear.

2. DESCRIPTION

The rear axle consists of a live axle mounted on suspension arms with coil springs and shock absorbers interposed between the rear axle housing and the underbody. The shock absorbers are mounted at the lower ends to brackets welded to the rear axle housing and at the upper ends to mounting brackets on the body.

The suspension arms hold the axle housing square to the body and share in controlling axle reactions to drive, braking and acceleration forces. The suspension arms are mounted at one end to brackets welded to the rear axle housing and at the other end to brackets on the vehicle underbody. Rubber bushes are used at all suspension arm mounting points.

Rebound rubbers are connected to the underbody inside each coil spring. Lateral movement is controlled by a Panhard rod mounted on the rear axle and the underbody of the vehicle.



Underbody view of the rear suspension.

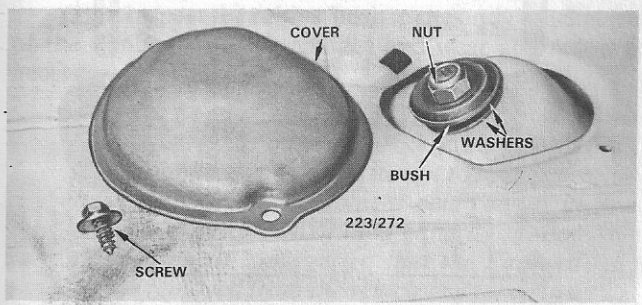
3. SHOCK ABSORBER

TO REMOVE

Sedan

(1) Raise the rear of the vehicle and support it on chassis stands placed under the rear axle housing.

(2) Working inside the luggage compartment, pull back the luggage compartment matting, remove the shock absorber upper mounting cover retaining screw and remove the cover.



View of rear shock absorber upper mounting. Sedan.

(3) While holding the shock absorber stem with a screwdriver remove the upper mounting nut, upper washer, rubber bush and lower washer from the stem.

(4) Working underneath the vehicle, remove the shock absorber lower mounting bolt and washer.

(5) Withdraw the shock absorber from the vehicle.

Station Wagon

(1) Raise the rear of the vehicle and support it on chassis stands placed under the rear axle housing.

(2) Open the tailgate and raise the spare wheel cover.

(3) Remove the nuts and screws retaining the outside metal strip to the top of the spare wheel cover, releasing the floor mat.

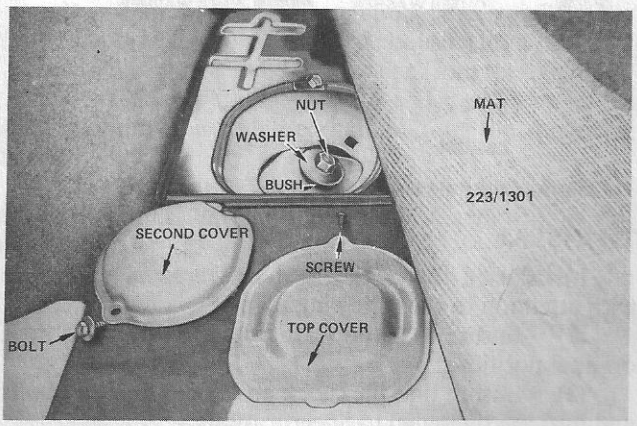
(4) Fold the floor mat towards the centre of the vehicle which will expose the top mounting covers.

(5) Remove the screw retaining the top cover and withdraw the top cover. Remove the retaining bolt and withdraw the second cover.

(6) While holding the shock absorber stem with a screwdriver remove the upper mounting nut, washer and rubber bush from the stem.

(7) Working underneath the vehicle, remove the shock absorber lower mounting bolt and washer.

(8) Withdraw the shock absorber from the vehicle.



View of rear shock absorber upper mounting. Station Wagon.

TO TEST AND BLEED

(1) Grip the shock absorber lower mounting eye in a vice with the unit in a vertical position.

(2) Firmly grasp the upper half of the shock absorber, pull it upward to the fully extended position and then slowly push it down until the shock absorber is fully retracted.

(3) Repeat operation (2) six or eight times to remove any slack spots caused by air in the system. If slack spots exist and cannot be removed by this method, the shock absorber is evidently defective and should be renewed.

(4) Check the shock absorber body for fluid leaks, damage and dents. As a shock absorber cannot be repaired in service it must be renewed when found to be defective.

(5) Check the mounting rubbers for deterioration and renew as necessary.

SPECIFICATIONS

Type:
- Front ..... Disc brakes with a single piston caliper
- Rear ..... Leading/trailing shoe drum brakes

Operation:
- Footbrake ..... Vacuum assisted dual circuit hydraulic on all wheels
- Handbrake ..... Mechanical on rear wheels

Brake pad thickness service limit ..... 1.0 mm
Brake lining thickness service limit ..... 1.0 mm
Brake disc run out limit ..... 0.15 mm
Master cylinder type ..... Tandem dual circuit

Brake pedal:
- Height ..... 154–164 mm
- Free travel ..... 3–6 mm

1. BRAKES TROUBLE SHOOTING

BRAKE PEDAL HARD

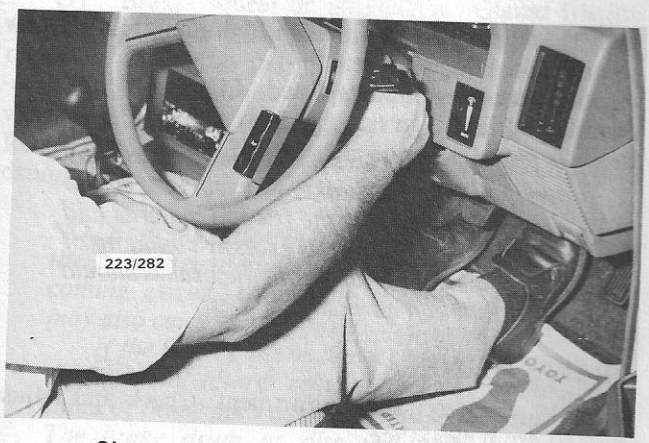
(1) Incorrect brake pads or shoe linings fitted: Check and replace with recommended type.

(2) Frozen pedal pivot: Rectify or renew pivot bolt and bush.

(3) Restricted brake line from master cylinder: Check brake lines and remove restriction or renew line.

(4) Frozen wheel cylinder or caliper pistons: Check, free up or renew pistons.

(5) Vacuum servo system inoperative: Check servo system and rectify.



Checking out the vacuum servo system.

NOTE: The vacuum servo system can be checked out as follows: With the engine switched off, pump the brake pedal several times to deplete any vacuum in the system. With the engine still switched off press down firmly on the brake pedal and hold it there noting the position and pressure required. Holding down on the brake pedal start the engine. If the servo system is operating correctly the brake pedal will sink slightly and the pressure required to hold it may even be reduced. If the pedal does not sink slightly when the engine is started then the brake servo unit can be considered inoperative.

BRAKE DRAG

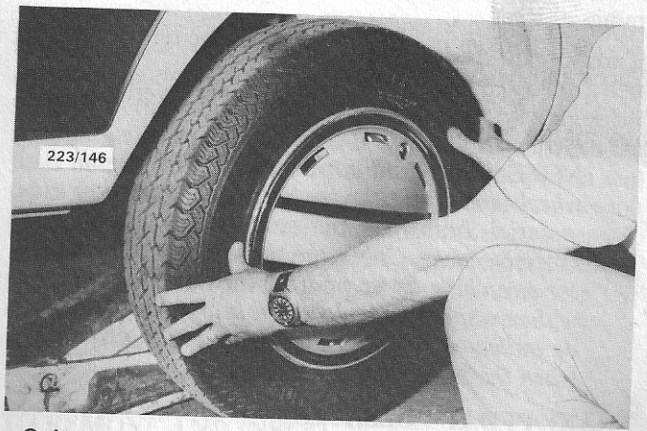
(1) Clogged master cylinder ports: Check and clean master cylinder and fluid reservoir.

(2) Frozen wheel cylinder or caliper pistons: Check, free up or renew pistons.

(3) Broken or stretched brake shoe return springs: Renew defective springs.

(4) Frozen handbrake cables: Free up or renew cables.

(5) Blocked vent in fluid reservoir cap: Check vent and remove obstruction.



Spin each wheel by hand to check for binding brakes.

NOTE: To check out this condition jack up the vehicle, support on chassis stands and spin all wheels to check for binding.

If the wheels are not binding, have an assistant apply and release the brakes. Check if the brakes are immediately releasing.

A clogged master cylinder port will cause binding on the two wheels fed by that particular circuit from the master cylinder. Open the bleeder valve on one of the offending wheels to check if pressure build up is the cause of the binding.

A frozen handbrake cable will usually cause binding on both rear wheels. To check out this condition disconnect the handbrake cable at the adjustment point, push each inner cable into the outer cables and check if the wheels will turn freely.

LOW SPONGY BRAKE PEDAL

(1) Incorrectly adjusted brake shoes: Check and adjust brake shoes.

(2) Lack of sufficient fluid in system: Check for leaks, replenish fluid to specified level and bleed brake system.

(3) Air in brake hydraulic system: Bleed hydraulic system.

NOTE: Care should be exercised when removing or installing the master cylinder assembly to ensure that brake fluid is not permitted to drop onto the surrounding paintwork of the vehicle. Brake fluid, if accidentally spilt, should be immediately washed away with water and then allowed to dry naturally and not wiped with a cloth.

Installation is a reversal of the removal procedure with attention to the following point:

It will be necessary to bleed the hydraulic system as described under the appropriate heading.

TO DISMANTLE

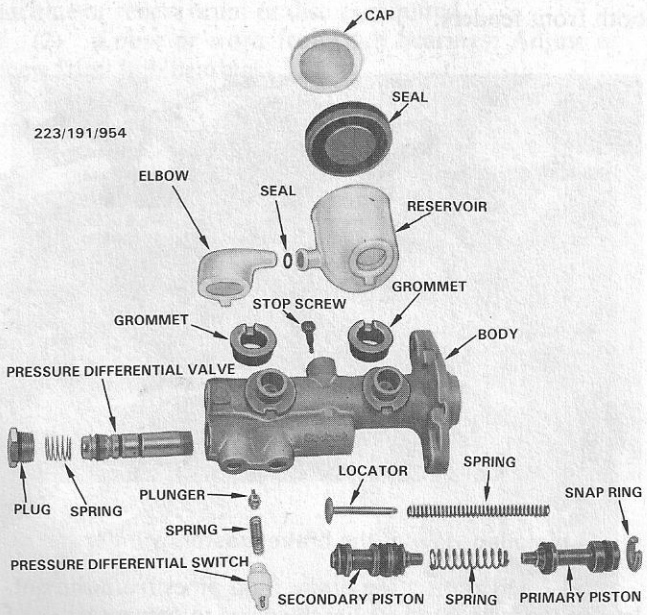
(1) Remove the master cylinder from the vehicle as previously described.

(2) Remove the reservoir cap and seal and drain the brake fluid from the reservoir into a suitable container. Discard the brake fluid, do not re-use.

NOTE: Do not remove the reservoir and elbow or the retaining grommets from the master cylinder body unless necessary.

(3) Using a suitable blunt rod, press the primary piston into the cylinder bore and simultaneously remove the retaining snap ring.

(4) Slowly release the pressure on the blunt rod and remove it from the piston. If spring pressure fails to release the primary piston, gently tap the rear of the master cylinder on a piece of wood to dislodge the primary piston assembly.



Dismantled view of brake master cylinder.

(5) Remove the primary piston from the master cylinder bore noting its installed position for correct assembly.

(6) Using a suitable blunt rod, press the secondary piston into the cylinder bore and simultaneously remove the secondary piston stop screw.

(7) Slowly release the pressure on the blunt rod and remove it from the master cylinder bore. Tap the rear of the master cylinder on a piece of wood to dislodge the secondary piston assembly and remove the piston assembly from the master cylinder bore noting its installed position for correct assembly.

(8) Unscrew and remove the pressure differential switch, then withdraw the plunger with its spring from the master cylinder.

(9) Remove the pressure differential end plug and by tapping the master cylinder on a piece of wood, withdraw the pressure differential spring and the valve assembly from the master cylinder noting its installed positon.

NOTE: If the pressure differential valve piston is thought to be suspect, it will have to be ordered separately. It is not usually included in a master cylinder repair kit.

(10) If however, the pressure differential valve assembly is serviceable, remove the three 'O' rings from their respective grooves. Remove the 'O' ring from the end plug. Note their correct positions.

(11) Noting their installed positions, remove and discard the seals from the primary and secondary pistons. It will be necessary to prise the seal retainers from the front of both pistons prior to removing the front seals from the pistons.

TO CLEAN AND INSPECT

(1) Thoroughly clean the master cylinder and components with methylated spirits, do not use petrol or other cleaning solvents.

(2) Inspect the master cylinder bores for wear, corrosion, or signs of pitting. Renew the master cylinder if any of these conditions exist.

(3) Inspect all pistons and springs for wear and damage. Renew as necessary.

(4) Ensure that the breather hole in the reservoir cap is free and remove any sediment that may have accumulated in the bottom of the reservoir.

TO ASSEMBLE

(1) Dip all the master cylinder components in clean fluid before assembly.

(2) Instal the centre seal onto the secondary piston with the lip of the seal facing the secondary piston return spring end.

(3) Instal the rear seal onto the secondary piston with the lip of the seal facing towards the pushrod and away from the centre seal.

(4) Instal the washer and the front seal onto the secondary piston with the lip of the seal facing the secondary piston return spring.

(5) Press the front seal retainer onto the piston ensuring that the locking teeth correctly locate into the groove in the secondary piston.

(8) Push the piston squarely by hand into the caliper bore and check for fluid leaks.

(9) Fit the caliper body over the pad assembly and the anchor plate and instal the attaching bolts. Securely tighten first the top bolt and then the bottom bolt.

(10) Top up the brake master cylinder reservoir with new brake fluid and pump the brake pedal a few times to bring the pads to their normal position alongside the disc.

(11) Instal the road wheels and lower the vehicle to the ground.

TO REMOVE AND INSTAL BRAKE DISC

(1) Raise the front of the vehicle, support on chassis stands and remove the road wheel.

(2) Remove the bolts securing the caliper assembly to the stub axle flange, withdraw the caliper assembly from the brake disc and suspend the caliper with tie wire so that the weight of the caliper is not taken by the flexible brake hose.

(3) Remove the grease cap from the hub.

(4) Remove the split pin from the stub axle and take off the castellated retainer.

(5) If a dial gauge is available, slightly tighten the stub axle nut and check the run out of the brake disc. See Specifications for run out limit.

(6) Remove the stub axle nut, thrust washer and outer hub bearing cone and withdraw the hub and disc assembly from the stub axle.

(7) Plug each end of the hub with clean cloth to prevent entry of dirt.

(8) Place the disc and hub assembly in a vice fitted with soft jaws and mark the hub and disc to ensure correct alignment on assembly.

(9) Remove the bolts securing the brake disc to the hub and separate the hub and disc.

(10) If necessary service the hub bearings and the seal as described in the Front Suspension section.

(11) Clean the disc with a suitable solvent and examine the disc for damage, scoring the wear.

NOTE: Should the disc require machining, remove the amount only required to eliminate the scoring or chipping.

Installation is a reversal of the removal procedure with attention to the following points:

(1) Clean the mating surfaces of the disc and hub flange, position the disc on the hub flange according to the marks made on removing and instal the retaining bolts and washers. Tighten the bolts securely.

(2) Fit the hub and disc assembly to the stub axle.

(3) Instal the outer hub bearing, washer and nut and adjust the hub bearings as described in the Front Suspension section.

(4) Instal the castellated retainer, secure the retainer with the split pin and fit the grease cap.

(5) Fit the caliper to the stub axle flange and tighten the retaining bolts securely.

(6) Depress the brake pedal to locate the brake pads to their normal running position alongside the disc.

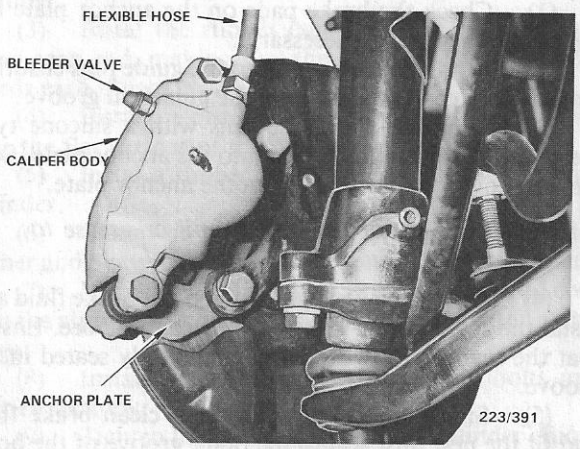
(7) Fit the road wheel, lower the vehicle to the ground and road test.

TO OVERHAUL CALIPER

(1) Raise the front of the vehicle, support on chassis stands and remove the road wheel.

(2) Loosen the metal brake pipe to flexible hose union at the body bracket, remove the retaining clip and withdraw the flexible hose from the body bracket.

(3) Remove the flexible hose to suspension unit retaining clip and disconnect the hose from the suspension unit.



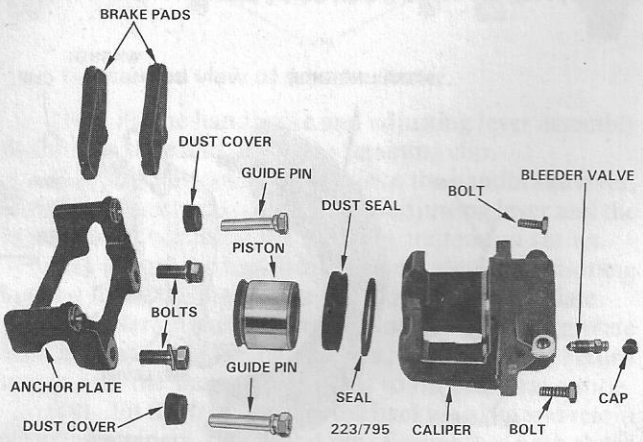
Installed view of the front caliper.

(4) Remove the flexible hose from the brake caliper.

(5) Remove and discard the bolts securing the caliper to the anchor plate guide pins and withdraw the caliper.

(6) Place a piece of soft cloth in front of the piston and using a low air pressure applied to the hydraulic brake hose aperture, gently force the piston from the caliper bore.

(7) Disengage the dust seal from its locating groove in the end of the caliper bore and remove it from the caliper.



Dismantled view of caliper components.

(8) Using a thin blunt probe, preferably made of wood or plastic, lift and remove the piston seal from its groove in the caliper bore.

(9) Pull the guide pins and their dust covers from the anchor plates.

(10) Clean all parts except the brake pads in methylated spirits and examine carefully for wear and corrosion. Renew any corroded, worn or doubtful parts. Discard the piston seal and the dust seal.

Assembly and installation is a reversal of the dismantling and removal procedure with attention to the following points:

(1) Check the brake pads on the anchor plate for wear and renew where necessary.

(2) Instal the dust covers to the guide pins ensuring that they are correctly seated in the guide pin groove.

(3) Lubricate the guide pins with a silicone type grease and push the guide pins into the anchor plate. Seat the dust covers in the grooves on the anchor plate.

NOTE: Do not use mineral oil or grease to lubricate the guide pins.

(4) Dip the new piston seal in clean brake fluid and instal the seal into the groove in the caliper bore. Ensure that the seal is not twisted and is correctly seated in the groove.

(5) Smear the caliper bore with clean brake fluid and fit the new dust seal to the outer groove of the bore. Ensure that the seal is squarely and firmly seated in its groove.

(6) Smear the outside of the piston with clean brake fluid. Guide the lip of the dust seal over the piston and push the piston into the bore. Push the piston by hand right into the bore and fit the outer lip of the dust seal squarely into the piston groove.

(7) Fit the caliper over the brake pads and disc and instal and tighten the new retaining bolts.

(8) Instal and tighten the flexible hose and metal brake pipe union.

(9) Bleed the hydraulic system as outlined under the heading Hydraulic System.

(10) Start the engine to activate the brake servo unit and depress the brake pedal hard. Check for fluid leaks.

6. REAR BRAKE ASSEMBLY

TO REMOVE AND DISMANTLE

NOTE: It is recommended that the brake wheel cylinders are removed and overhauled when the rear brake linings are renewed.

(1) Raise the rear of the vehicle, support on chassis stands and remove the road wheel.

(2) Release the handbrake and remove the brake drum.

NOTE: Self adjusters are fitted to the rear brake assemblies which may have to be released to enable the brake drum to be removed. To carry out this operation remove the rubber grommet from the rear of the backing plate, insert a thin screwdriver into the aperture and push the self adjuster lever away from the adjusting screw. While holding the adjuster lever away from the adjusting screw insert an adjusting tool in through the aperture and engage the adjusting tool with the teeth on the adjusting screw. Move the outer end of the adjusting tool upwards to rotate the adjusting screw until the brake drum can be removed from the axle flange.

The brake shoe linings may now be inspected for wear.

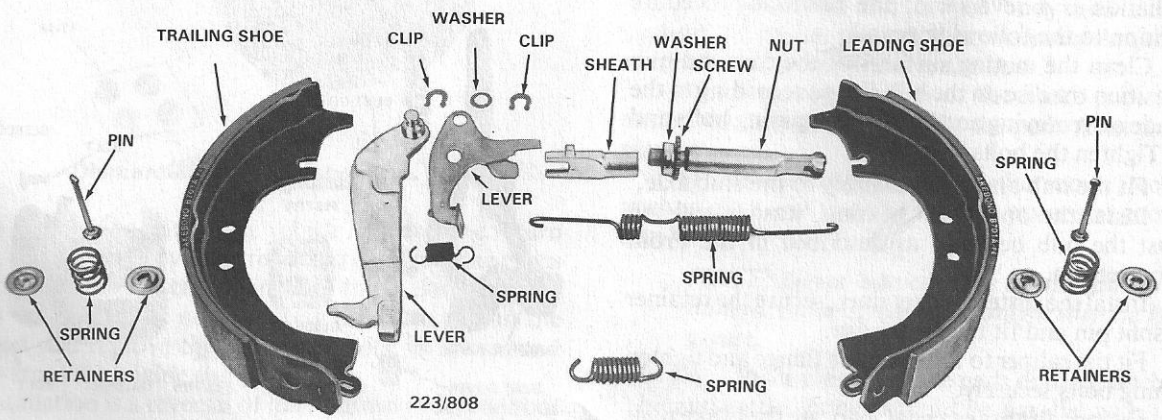
(3) Mark each shoe to ensure correct assembly.

(4) Remove the upper and lower brake shoe return springs using a suitable pair of brake spring pliers or vice grip pliers.

(5) Compress the shoe retaining spring on the front shoe, turn the pin through 90 degrees and remove the retainers, spring and pin. Remove the front shoe from the backing plate.

(6) Using the same procedure, remove the retainers, spring and pin from the rear shoe.

(7) Tie or clamp the wheel cylinder rubber boots in position to retain the wheel cylinder as an assembly.



Dismantled view of the rear brake assembly.

(8) Withdraw the rear shoe and unhook the handbrake cable from its retaining lug on the backing plate.

(9) Remove the automatic adjuster tension spring, raise the self adjusting lever and remove the adjuster assembly.

(10) Disconnect the handbrake cable from the handbrake lever and remove the rear shoe.

(11) Only if the brake shoes are to be renewed, remove the retaining clip from the rear of the rear shoe and remove the handbrake lever together with the adjusting lever from the shoe.

(12) Undo the brake pipe from the wheel cylinder at the rear of the backing plate.

(13) Remove the retaining bolts from the rear of the backing plate and withdraw the wheel cylinder. Plug the brake pipe to prevent loss of hydraulic fluid and the entry of dirt.

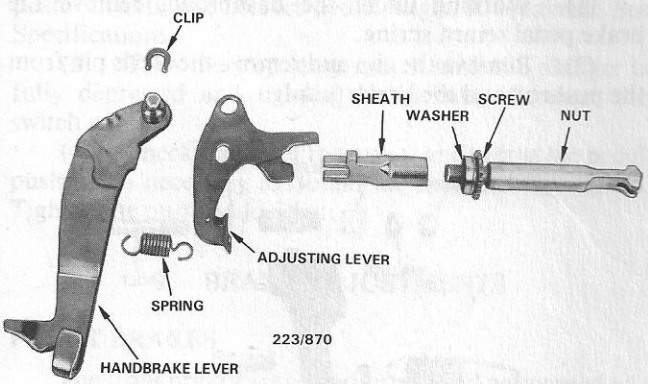
(14) Remove the boots, pistons, cups, and spring from the wheel cylinder.

TO CLEAN AND INSPECT

(1) Check the shoe linings for wear. If the thickness of the lining remainings is 1.0 mm or less they must be renewed.

(2) Check the shoe linings for oil saturation and gumminess and renew as required.

NOTE: Linings must be renewed as sets with the corresponding linings on the opposite wheel.



Dismantled view of the self adjusting mechanism.

(3) Inspect the brake drum for cracks, scoring and out of round. Renew or machine the brake drum as necessary.

(4) Inspect the brake shoe return springs for fatigue and distortion. Renew as required.

(5) Wash the wheel cylinder components in methylated spirits. Check the wheel cylinder pistons and cylinder bore for wear or pitting and renew as necessary.

(6) Check the bleeder valve for blockage.

(7) Clean the adjusting screw threads and screw the adjusting screw right into the adjusting nut.

(8) Thoroughly clean the backing plate.

TO ASSEMBLE AND INSTAL

Assembly and installation is a reversal of the removal and dismantling procedure with attention to the following points:

NOTE: Once the wheel cylinder has been dismantled new rubber cups and boots must be fitted.

(1) Soak all internal components of the cylinder in clean hydraulic brake fluid before assembling.

(2) Instal the compression spring into the wheel cylinder.

(3) Instal the rubber cups into the cylinder, one from each end, making sure the lips of the cups face towards each other.

(4) Instal the pistons into the cylinder bore making sure the flat surface of the piston is against the cups.

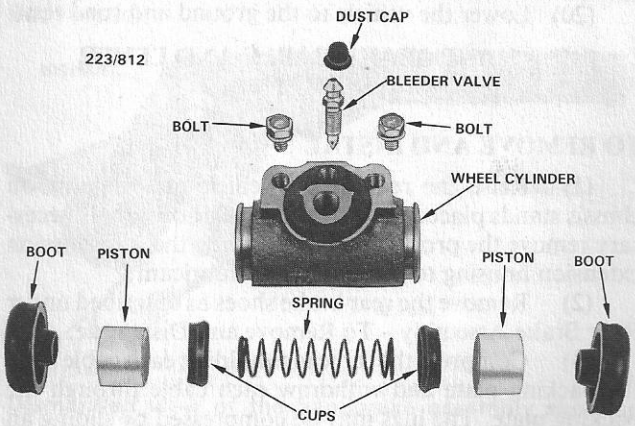
(5) Instal a rubber boot to each end of the wheel cylinder.

(6) Clamp or tie the wheel cylinder assembly together and place the wheel cylinder onto the backing plate.

(7) Remove the plug from the brake pipe and connect the pipe to the wheel cylinder but do not tighten at this stage.

(8) Instal the wheel cylinder retaining bolts and tighten securely.

(9) Tighten the brake pipe to wheel cylinder union. Instal the bleeder valve and tighten to just over finger tight.



Dismantled view of wheel cylinder.

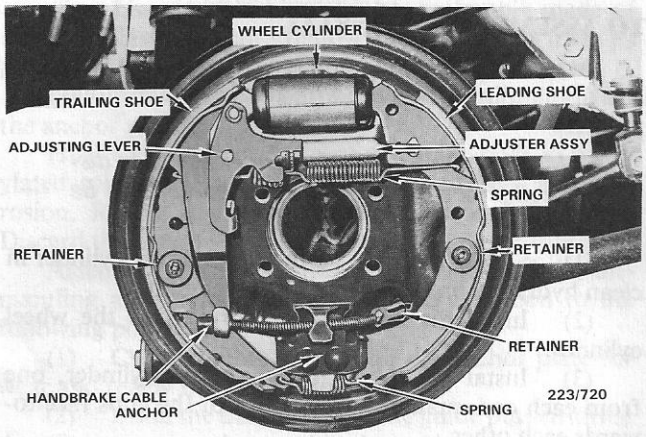
(10) Fit the handbrake and adjusting lever assembly to the rear shoe and crimp the retaining clip.

(11) Fit the handbrake cable to the handbrake lever. Instal the adjuster assembly to self adjusting lever and the brake shoe, then instal the self adjuster tension spring.

(12) Instal the handbrake cable under its positioning lug and instal the rear brake shoe to the backing plate.

(13) Retain the rear brake shoe to the backing plate with the retaining spring and pin. Fit the upper return spring with the short coil end first to the rear brake shoe.

(14) Fit the front shoe to the backing plate and retain with the retainers, spring and pin. Ensure that both shoes are located correctly with the wheel cylinder piston, the backing plate and the adjusting mechanism.



Installed view of rear brake assembly.

(15) Hook the upper brake shoe return spring hook into the eye on the front shoe and then instal the lower brake shoe return spring. Remove the wheel cylinder clamp or tie wire.

(16) Carry out the overhaul procedure on the remaining rear brake assembly.

(17) Fit the brake drums and road wheels and adjust the brakes manually as described under the heading Brake Adjustments. Instal the rubber grommets.

(18) Bleed the hydraulic system as described in Hydraulic System - To Bleed.

(19) The brake shoes are finally and automatically adjusted by applying the handbrake several times.

(20) Lower the vehicle to the ground and road test.

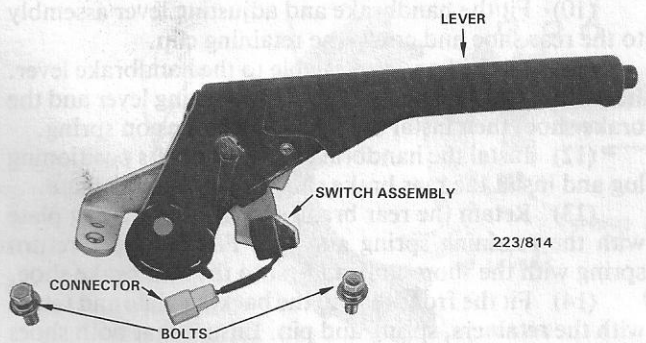
7. HANDBRAKE CABLE AND LEVER ASSEMBLY

TO REMOVE AND INSTAL

(1) Raise the rear of the vehicle and support on chassis stands placed under the rear axle housing. If necessary remove the propeller shaft and plug the transmission extension housing to prevent loss of lubricant.

(2) Remove the rear brake shoes as described under Rear Brake Assembly - To Remove and Dismantle.

(3) Compress the three lugs holding each cable onto the backing plate and withdraw each cable through the backing plate. The lugs may be compressed by sliding an appropriate size ring spanner over the lugs.



Dismantled view of handbrake lever assembly.

(4) Working above the rear of the transmission assembly, separate the handbrake cables from the equaliser and remove the equaliser.

(5) Withdraw the inner cable nylon guides from their respective underbody mountings, remove the outer cable bracket retaining bolts and withdraw the handbrake cable assembly from the vehicle.

(6) Remove the rear half of the centre console from the vehicle as described in the Body section.

(7) Disconnect the handbrake warning lamp switch wire at its connector.

(8) Remove the bolts retaining the handbrake lever assembly and remove the handbrake assembly with the front cable from the vehicle.

(9) Check the cables for excessive stretching, chafing or broken strands. Ensure the inner cables move freely in the outer cables.

(10) Check the handbrake lever ratchet and pawl for wear and renew parts as necessary.

Installation is a reversal of the removal procedure with attention to the following points:

(1) Renew all components which, upon inspection, prove to be unserviceable.

(2) Apply lubricant to all working parts when installing.

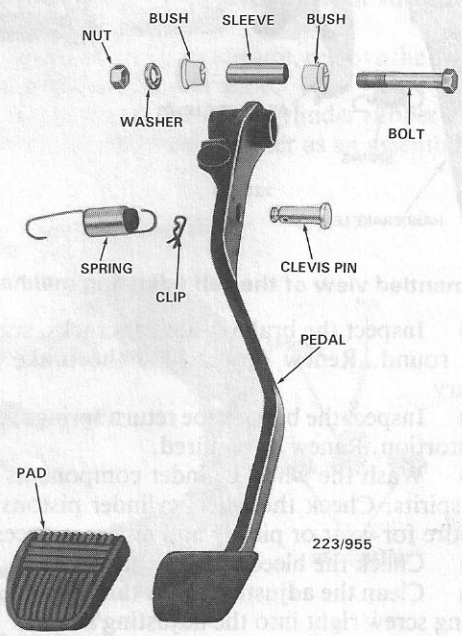
(3) Adjust the rear brakes, then the handbrake as described under the heading Brake Adjustments.

8. BRAKE PEDAL

TO REMOVE AND INSTAL

(1) Working under the dashbroad, remove the brake pedal return spring.

(2) Remove the clip and remove the clevis pin from the pushrod and the brake pedal.



Dismantled view of brake pedal components.