

FRAME AND BUMPERS

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BUMPERS

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REMOVAL AND INSTALLATION

FRONT BUMPER FASCIA

It is not necessary to remove the headlamp assemblies to remove the front bumper fascia.

REMOVAL

- (1) Release hood latch and open hood.
- (2) Remove screws holding top of grille to headlamp adapter assembly (Fig. 1).
- (3) Hoist and support vehicle on safety stands. Refer to Group 0, Lubrication and Maintenance, for proper hoisting and jacking procedures.
- (4) Remove push-in fasteners holding fascia to underside of bumper reinforcement.
- (5) Remove inner wheelhouse as necessary to access nuts holding fascia wings to fender.
- (6) Remove nuts holding fascia wings to fender.
- (7) Slide fascia forward and separate fascia from vehicle.
- (8) Disengage fog lamp wire connectors from back of fog lamps, if so equipped.

INSTALLATION

- (1) Ensure that energy management foam is properly installed in front fascia (Fig. 2).
- (2) Engage fog lamp wire connectors to back of fog lamps, if so equipped.
- (3) Position fascia on vehicle and slide rearward, being careful to ensure that the grille slides between hood latch handle and headlamp adapter assembly.

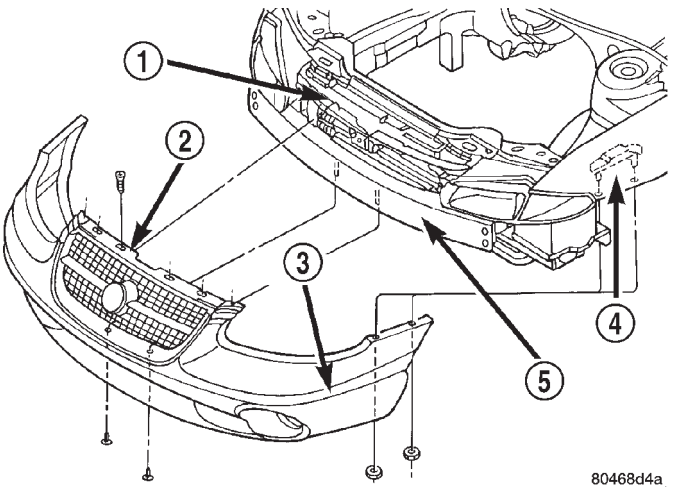
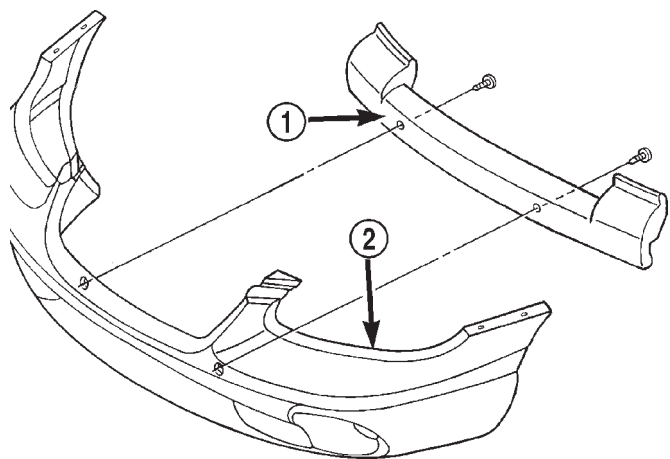


Fig. 1 Front Bumper Fascia

- 1 – HEADLAMP ADAPTER ASSEMBLY
- 2 – GRILLE
- 3 – FASCIA
- 4 – FENDER
- 5 – FRONT BUMPER REINFORCEMENT

- (4) Install nuts holding fascia wings to fender.
- (5) Install inner wheelhouse.
- (6) Install push-in fasteners holding fascia to underside of bumper reinforcement.
- (7) Install screws holding top of grille to headlamp adapter assembly.

REMOVAL AND INSTALLATION (Continued)



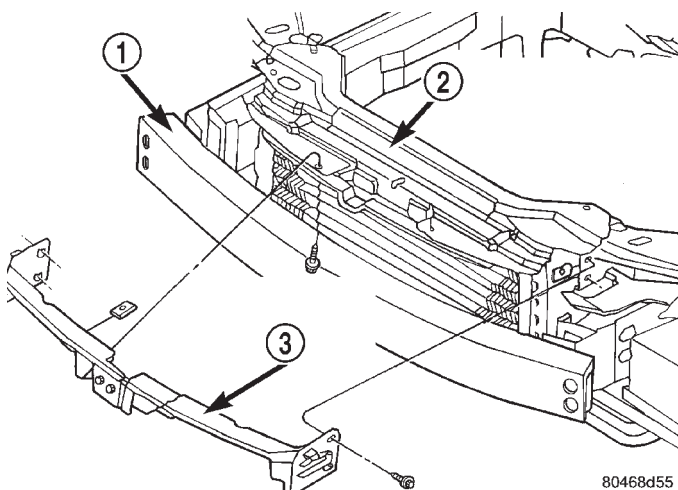
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Fig. 2 Front Bumper Energy Management Foam

- 1 - FRONT BUMPER ENERGY MANAGEMENT FOAM
2 - FRONT FASCIA

HEADLAMP ADAPTER ASSEMBLY**REMOVAL**

- (1) Remove headlamp assemblies. Refer to Group 8L, Lamps, for proper procedure.
- (2) Remove front fascia.
- (3) Remove bolts holding headlamp adapter to radiator closure panel from headlamp cavities (Fig. 3).
- (4) Remove bolts holding underside of adapter assembly to upper radiator crossmember.
- (5) Separate headlamp adapter assembly from vehicle.



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Fig. 3 Headlamp Adapter Assembly

- 1 - FRONT BUMPER REINFORCEMENT
2 - UPPER RADIATOR SUPPORT CROSSMEMBER
3 - HEADLAMP ADAPTER ASSEMBLY

INSTALLATION

- (1) Position headlamp adapter assembly on vehicle.
- (2) Loosely install bolts holding headlamp adapter to radiator closure panel from headlamp cavities.
- (3) Loosely install bolts holding underside of adapter assembly to upper radiator crossmember.
- (4) Tighten all bolts.
- (5) Install front fascia.
- (6) Install headlamp assemblies. Refer to Group 8L, Lamps, for proper procedures.

REAR BUMPER FASCIA**REMOVAL**

- (1) Release decklid latch and open decklid.
- (2) Remove trunk lining as necessary to access nut attaching rear fascia to rear closure panel.
- (3) Remove screws attaching fascia to rear closure panel and nuts securing to inner quarter panel (Fig. 4).
- (4) Hoist and support vehicle on safety stands. Refer to Group 0, Lubrication and Maintenance, for proper procedure.
- (5) Remove push-in fasteners attaching bottom of fascia to rear bumper reinforcement.
- (6) Disengage license plate lamp wire connector.
- (7) Remove rear wheelhouse splash shields as necessary to access nuts attaching fascia to quarter panels.
- (8) Remove nuts attaching rear fascia to quarter panels.
- (9) Remove screw attaching fascia to right rear quarter panel.
- (10) Slide fascia rearward and remove from vehicle.

INSTALLATION

- (1) Ensure that the energy management foam is properly installed in rear fascia (Fig. 5).
- (2) Position fascia on vehicle and slide forward to engage studs on quarter panel.

CAUTION: Ensure that license plate wire connector is properly routed through energy management foam and fascia.

- (3) Install nuts attaching rear fascia to quarter panels, starting with the rearward nut working forward.
- (4) Install screw attaching rear fascia to right rear quarter panel.

NOTE: Hold fascia completely forward until first nut is secured.

REMOVAL AND INSTALLATION (Continued)

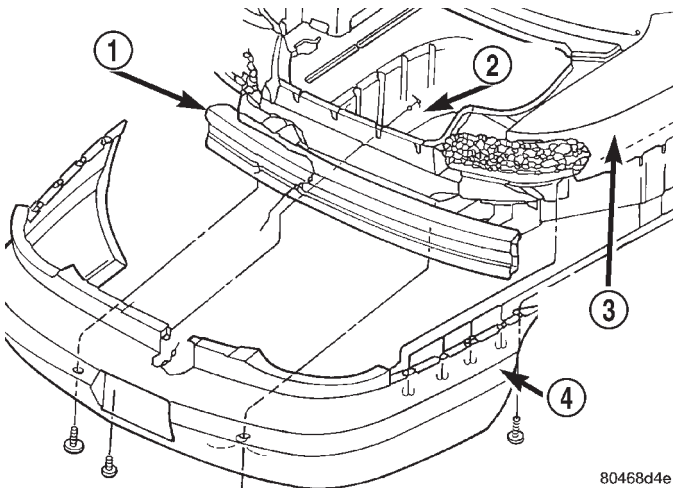


Fig. 4 Rear Bumper Fascia

- 1 – REAR BUMPER REINFORCEMENT
- 2 – TRUNK
- 3 – QUARTER PANEL
- 4 – REAR BUMPER FASCIA

- (5) Install rear wheelhouse splash shields.
- (6) Connect license plate lamp wire connector.
- (7) Install push-in fasteners attaching rear fascia to rear bumper reinforcement.
- (8) Install nuts attaching rear fascia to inner quarter panel.
- (9) Install screws attaching rear fascia to closure panel.
- (10) Install trunk lining.

REAR BUMPER REINFORCEMENT

REMOVAL

- (1) Remove rear fascia.
- (2) Support bumper reinforcement on a suitable lifting device.
- (3) Mark position of nuts on frame rail to aid in installation.
- (4) Remove nuts holding rear bumper reinforcement to frame rail (Fig. 6).
- (5) Separate bumper reinforcement from vehicle.

INSTALLATION

- (1) Position rear bumper reinforcement on vehicle.

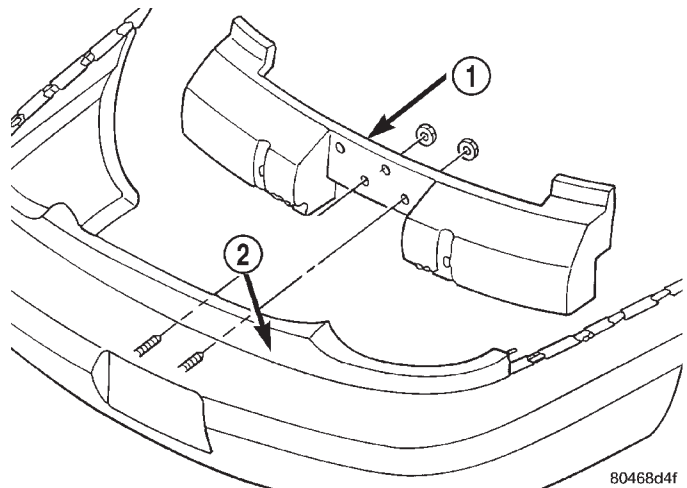


Fig. 5 Rear Bumper Energy Management Foam

- 1 – ENERGY MANAGEMENT FOAM
- 2 – REAR BUMPER FASCIA

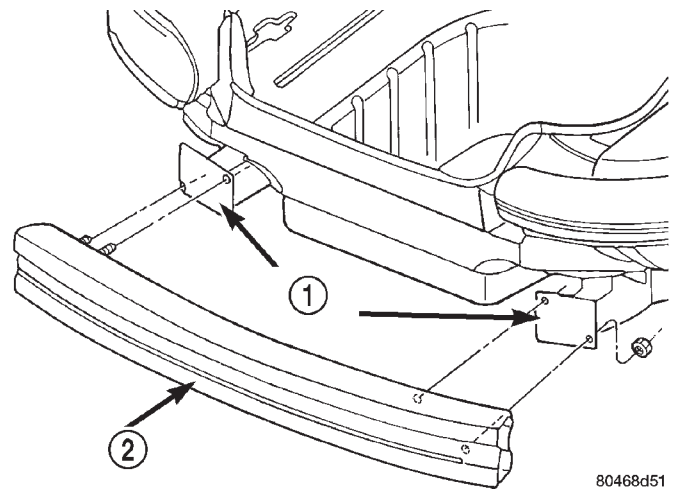


Fig. 6 Rear Bumper Reinforcement

- 1 – FRAME RAIL
- 2 – FRONT BUMPER REINFORCEMENT

- (2) Install nuts holding bumper reinforcement to frame rail. Use previously made marks to properly position bumper reinforcement.
- (3) Install rear fascia.

FRAME

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DESCRIPTION AND OPERATION

REAR SUSPENSION CROSSMEMBER

DESCRIPTION

This vehicle is equipped with a bolt in type rear suspension crossmember. The crossmember on this vehicle is the same for all of the optional suspensions that are available on the vehicle.

REMOVAL AND INSTALLATION

FRONT SUSPENSION CROSSMEMBER

REMOVAL

(1) Hoist and support vehicle on safety stands. Refer to Group 0, Lubrication and Maintenance, for proper procedure.

(2) Place a suitable lifting device under front suspension crossmember.

(3) Remove bolts holding suspension strut to the lower control arm. Refer to Group 2, Suspension, for proper procedures.

(4) Disengage lower ball joints from lower control arms. Refer to Group 2, Suspension, for proper procedures.

(5) Remove bolts holding front of suspension crossmember to frame rails under upper control arms.

(6) Loosen bolts holding rear of suspension crossmember to frame rail torque boxes.

(7) Allow the front of the suspension crossmember to swing away from the frame rails.

(8) Remove bolts holding steering gear to top of suspension crossmember (Fig. 1).

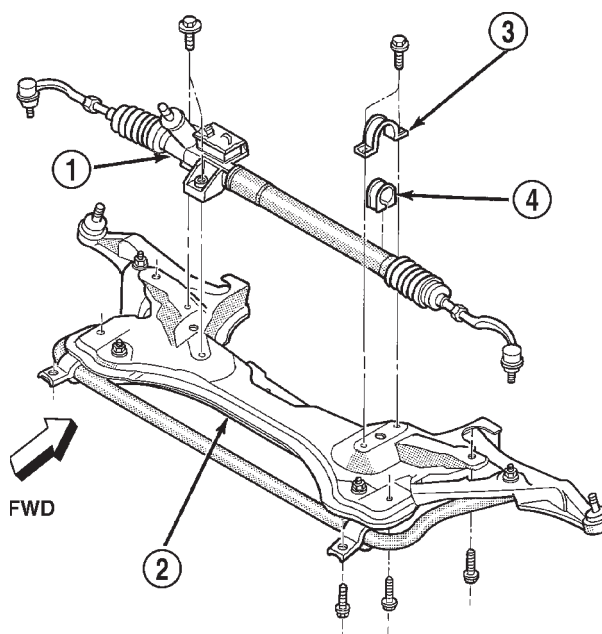
CAUTION: Do not allow steering gear to hang by the pressure or return hoses, damage to hoses can result.

(9) Using mechanics wire, tie steering gear to structure above.

(10) Raise crossmember back into position.

(11) Remove bolts holding rear of crossmember to frame rail torque boxes.

(12) Lower front suspension crossmember away from bottom of vehicle.



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Fig. 1 Front Suspension Crossmember

- 1 - STEERING GEAR
- 2 - FRONT SUSPENSION CROSSMEMBER
- 3 - CLAMP
- 4 - ISOLATOR

INSTALLATION

(1) Raise front suspension crossmember into position on vehicle.

(2) Loosely install bolts holding rear of crossmember to frame rail torque boxes.

(3) Lower crossmember and install bolts holding steering gear to top of suspension crossmember.

(4) Raise crossmember into position.

(5) Tighten bolts holding rear of suspension crossmember to frame rail torque boxes.

(6) Install bolts holding front of suspension crossmember to frame rails under upper control arm.

REMOVAL AND INSTALLATION (Continued)

(7) Engage lower ball joint to lower control arms. Refer to Group 2, Suspension, for proper procedures.

(8) Install bolts holding suspension strut to lower control arm. Refer to Group 2, Suspension, for proper procedures.

REAR SUSPENSION CROSSMEMBER

REMOVE

(1) Raise vehicle on jackstands or centered on a frame contact type hoist. See Hoisting in the Lubrication and Maintenance section of this manual, for the required lifting procedure to be used for this vehicle.

(2) Remove both rear wheel and tire assemblies from the vehicle.

(3) Remove the shock absorber clevis bracket to rear knuckle attaching bolt and nut on both sides of the vehicle (Fig. 2).

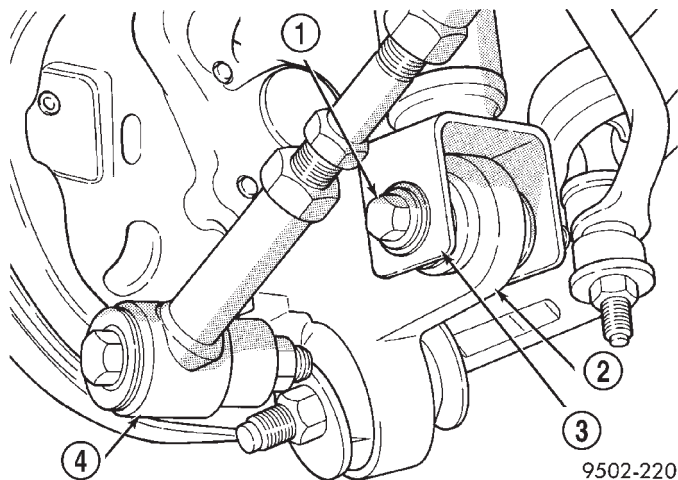


Fig. 2 Shock Absorber To Knuckle Attaching

- 1 - ATTACHING BOLT
- 2 - REAR KNUCKLE
- 3 - SHOCK ABSORBER CLEVIS BRACKET
- 4 - LATERAL LINK

(4) Remove muffler support bracket from rear frame rail (Fig. 3).

(5) Remove the rear exhaust pipe hanger from the rear suspension crossmember (Fig. 4). Let the exhaust system drop down as far as possible.

(6) Position a transmission jack and wooden block under the center of the rear suspension crossmember to support and lower crossmember during removal (Fig. 5).

(7) Remove the routing clips for the wheel speed sensor cable from the brackets on the upper control arm (Fig. 6).

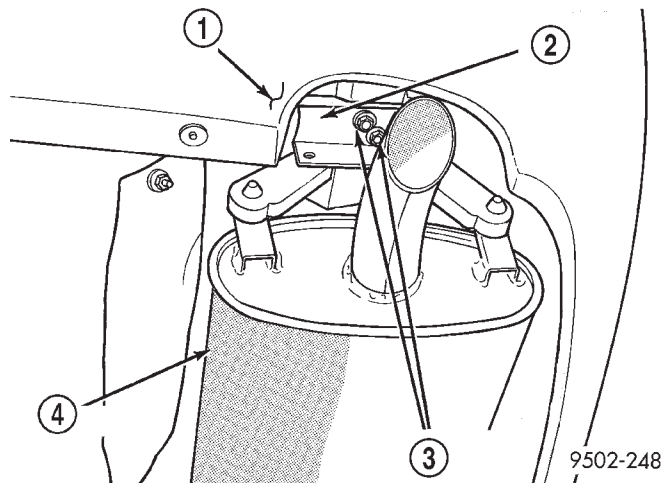


Fig. 3 Muffler Support Bracket

- 1 - REAR FASCIA
- 2 - MUFFLER SUPPORT BRACKET
- 3 - ATTACHING BOLTS
- 4 - MUFFLER

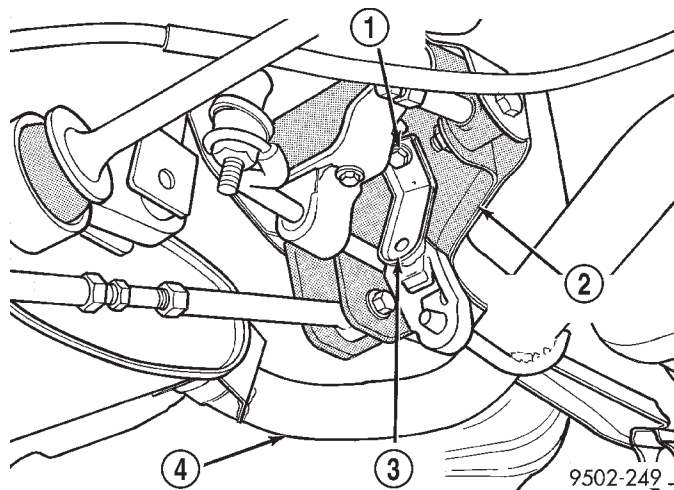


Fig. 4 Exhaust Pipe Hanger At Rear Suspension Crossmember

- 1 - BOLT
- 2 - REAR SUSPENSION CROSSMEMBER
- 3 - HANGER BRACKET
- 4 - EXHAUST PIPE

(8) Remove the nuts and bolts on each side of the vehicle attaching the 4 lateral links to the knuckles.

(9) Remove the 4 bolts attaching the rear suspension crossmember to the rear frame rails (Fig. 7).

(10) Lower the rear suspension crossmember enough to access the upper control arm pivot bar to crossmember attaching bolts (Fig. 8).

REMOVAL AND INSTALLATION (Continued)

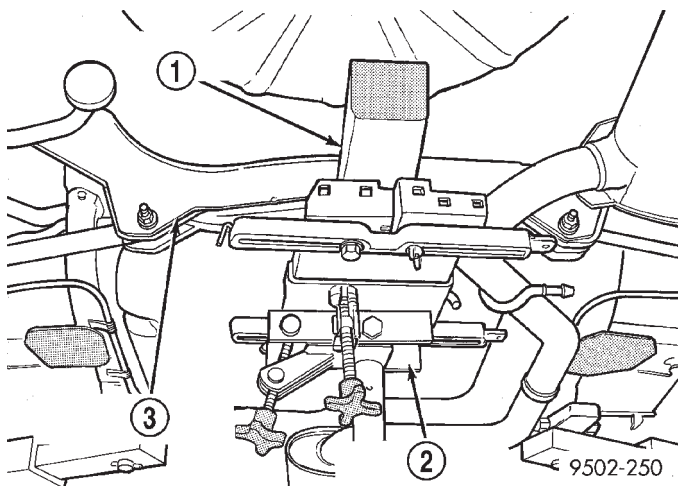


Fig. 5 Lowering And Supporting Rear Suspension Crossmember

- 1 - WOODEN BLOCK
- 2 - TRANSMISSION JACK
- 3 - REAR SUSPENSION CROSSMEMBER

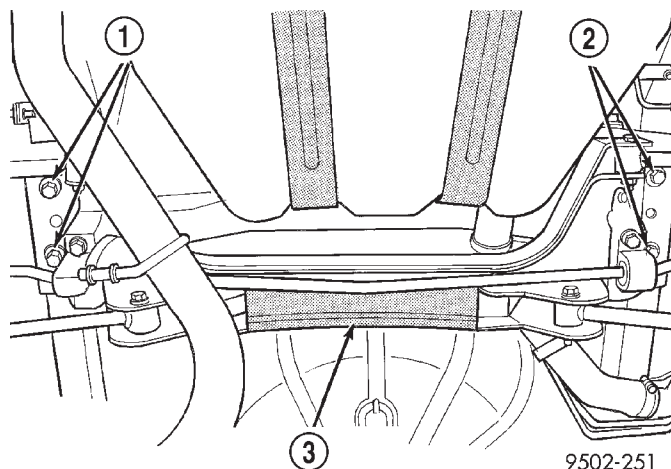


Fig. 7 Suspension Crossmember Attachment To Frame Rails

- 1 - ATTACHING BOLTS
- 2 - ATTACHING BOLTS
- 3 - REAR SUSPENSION CROSSMEMBER

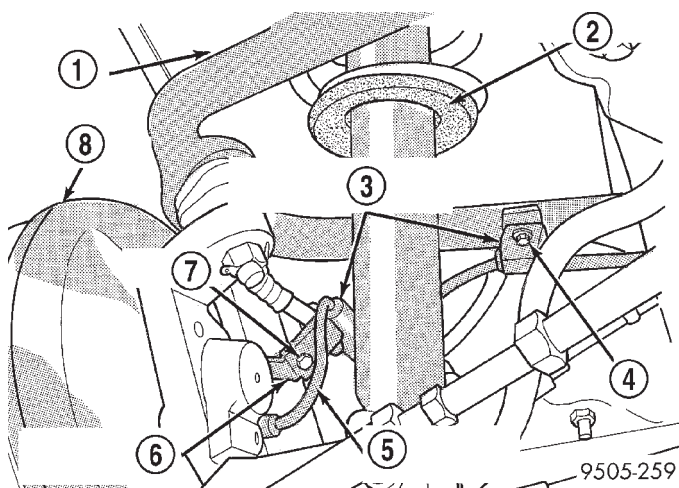


Fig. 6 Speed Sensor Cable Attachment To Control Arm

- 1 - UPPER CONTROL ARM
- 2 - SHOCK ABSORBER
- 3 - SPEED SENSOR CABLE ROUTING CLIPS
- 4 - BOLT
- 5 - SPEED SENSOR CABLE
- 6 - BRAKE FLEX HOSE BRACKET
- 7 - BOLT
- 8 - BRAKE DRUM

NOTE: One flat washer is used at each upper control arm pivot bar attaching bolt. The flat washer is located between the pivot bar and the rear suspension crossmember. Be sure the washers are not lost when removing the pivot bar attaching bolts from the rear suspension crossmember.

(11) Remove the 4 bolts (Fig. 8) attaching the upper control arm pivot bars to the rear suspension crossmember. Remove the control arms from the crossmember.

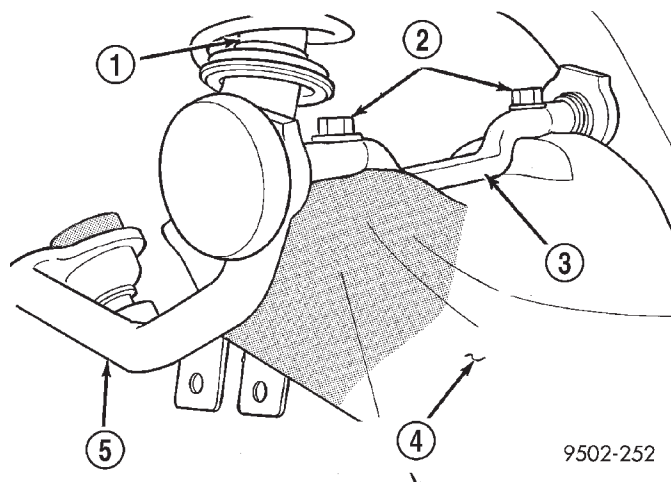


Fig. 8 Upper Control Arm Attachment To Crossmember

- 1 - SHOCK ABSORBER
- 2 - ATTACHING BOLTS
- 3 - UPPER CONTROL ARM PIVOT BAR
- 4 - REAR SUSPENSION CROSSMEMBER
- 5 - UPPER CONTROL ARM

(12) Lower the rear suspension crossmember, lateral arms and stabilizer bar as far as possible using the transmission jack. Then with the aid of a helper remove rear suspension crossmember from the vehicle.

(13) Transfer the lateral arms, stabilizer bar mounting brackets and the stabilizer bar and bush-

REMOVAL AND INSTALLATION (Continued)

ings to the replacement crossmember before installing the replacement crossmember in the vehicle. Tighten the stabilizer bar mounting bracket to rear crossmember mounting bolts to a torque of 27 N·m (20 ft. lbs.). Tighten the 4 lateral arm to crossmember attaching bolts to a torque of 95 N·m (80 ft. lbs.). **Install the lateral arm to crossmember bolts so head of bolt will be toward the front of the vehicle when the crossmember is installed.**

INSTALLATION

(1) Install the rear suspension crossmember, lateral arms and rear stabilizer bar back into the vehicle as an assembly.

(2) With the aid of a helper position rear suspension crossmember back in vehicle and support it using the transmission jack.

NOTE: One flat washer is used at each upper control arm pivot bar attaching bolt. The flat washer is located between the pivot bar and the rear suspension crossmember. Be sure 1 flat washer is used at each bolt attaching the pivot bar to the rear suspension crossmember.

(3) Align the upper control arm pivot bars with the mounting holes in the rear suspension crossmember. Install the pivot bar attaching bolts and washers. Tighten the 4 pivot bar to crossmember attaching bolts (Fig. 8) to a torque of 107 N·m (80 ft. lbs.).

(4) Using transmission jack, raise rear suspension crossmember up to the rear frame rails and loosely install the 4 attaching bolts.

(5) Position a drift of the appropriate size into the positioning hole in each side of rear suspension crossmember and locating holes in the frame rail of the body. (Fig. 9). This is required to properly position the rear suspension crossmember side-to-side and front-to-rear on the body of the vehicle. Then tighten the 4 crossmember to frame rail attaching bolts to 107 N·m (80 ft. lbs.). Remove drifts from rear suspension crossmember.

(6) Align lateral links with knuckles and install the lateral arm to knuckle attaching bolts and washers. Tighten the 4 lateral arm to knuckle attaching bolts to a torque of 107 N·m (80 ft. lbs.).

(7) Remove transmission jack supporting rear suspension crossmember.

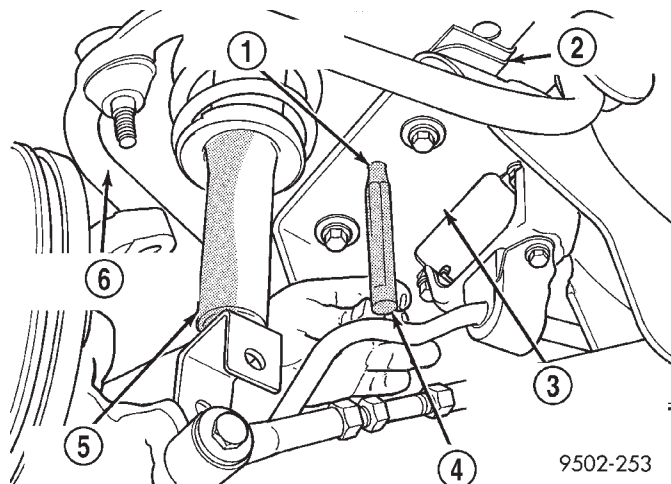


Fig. 9 Locating Rear Suspension Crossmember In Vehicle

- 1 – POSITIONING HOLE
- 2 – FRAME RAIL
- 3 – REAR SUSPENSION CROSSMEMBER
- 4 – DRIFT
- 5 – SHOCK ABSORBER
- 6 – UPPER CONTROL ARM

(8) Install muffler support bracket on rear frame rail (Fig. 3). Install rear exhaust pipe hanger on rear suspension crossmember (Fig. 4).

(9) Install the wheel speed sensor cable routing clip on the upper control arm mounting bracket (Fig. 6). Install and securely tighten attaching bolt.

(10) Install wheel and tire assembly on vehicle. Tighten the wheel mounting stud nuts in proper sequence until all nuts are torqued to half specification. Then repeat the tightening sequence to the full specified torque of 135 N·m (100 ft. lbs.).

(11) Lower vehicle to the ground.

(12) Check and reset if required, rear wheel alignment (camber and toe) to meet the preferred specifications.

SPECIFICATIONS

FRAME DIMENSIONS

Frame dimensions are listed in metric scale. All dimensions are from center to center of Principal Locating Point (PLP), or from center to center of PLP and fastener location.

SPECIFICATIONS (Continued)

VEHICLE PREPARATION

Position the vehicle on a level work surface. Using screw or bottle jacks, adjust the vehicle PLP heights to the specified dimension above a level work surface. Vertical dimensions can be taken from the work surface to the locations indicated were applicable (Fig. 10), (Fig. 11), (Fig. 12), (Fig. 13), and (Fig. 14).

TORQUE SPECIFICATIONS

DESCRIPTION

TORQUE

Rear Bumper Reinforcement

Attaching Nut 28 N·m (21 ft. lbs.)

Front Suspension Crossmember

Attaching Bolt Front 109 N·m (80 ft. lbs.)

Attaching Bolt Rear 102 N·m (75 ft. lbs.)

Radiator Support Crossmember

Attaching Bolts 115 N·m (85 ft. lbs.)

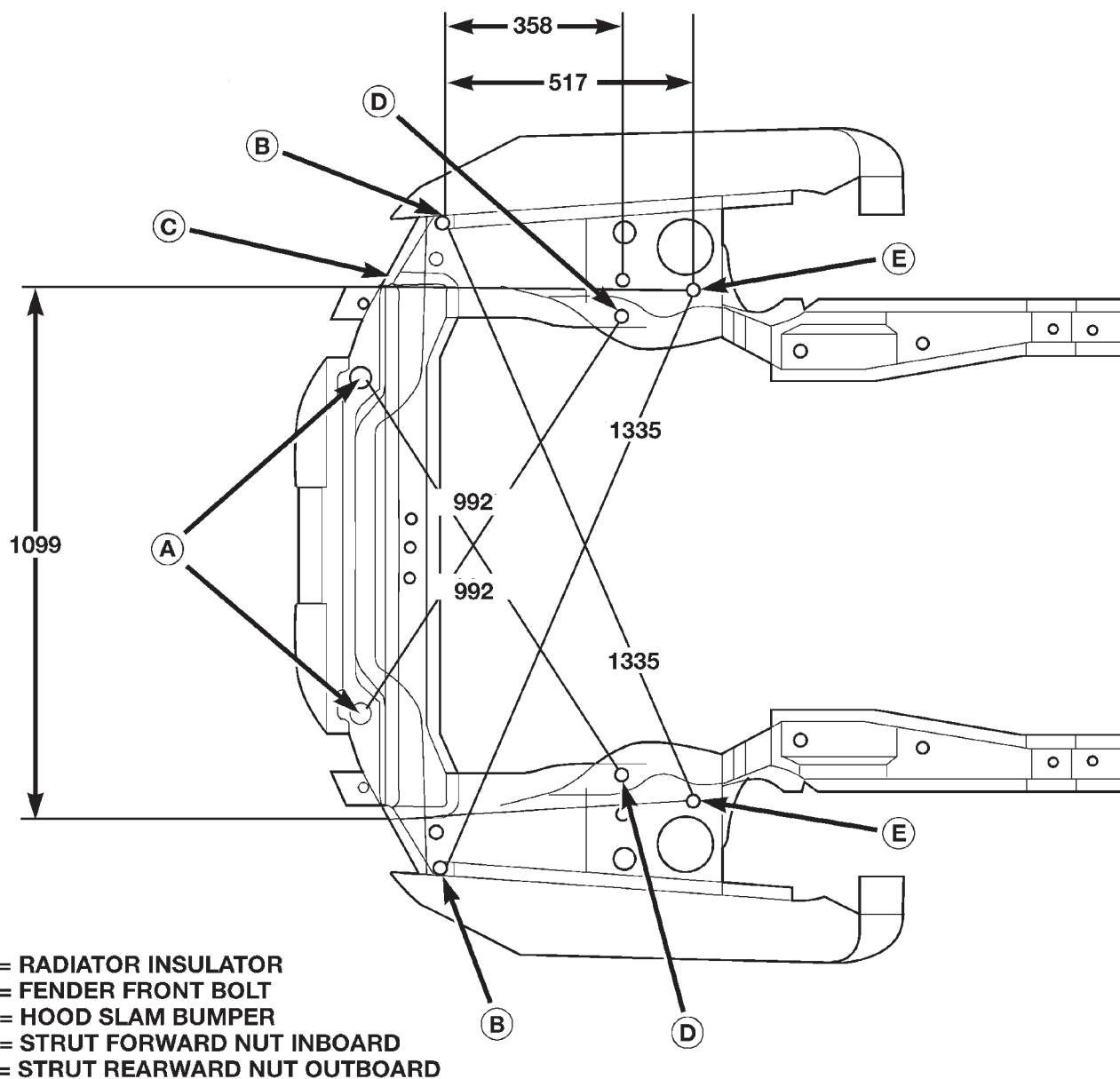
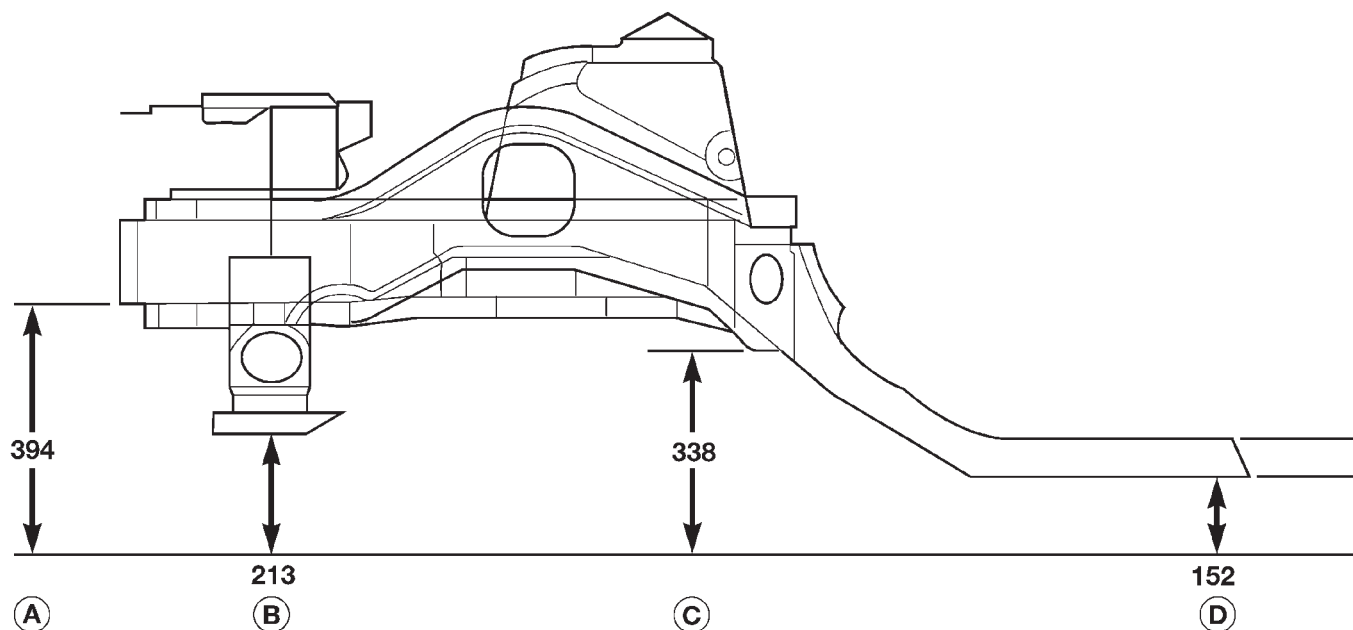


Fig. 10 Engine Compartment Top View

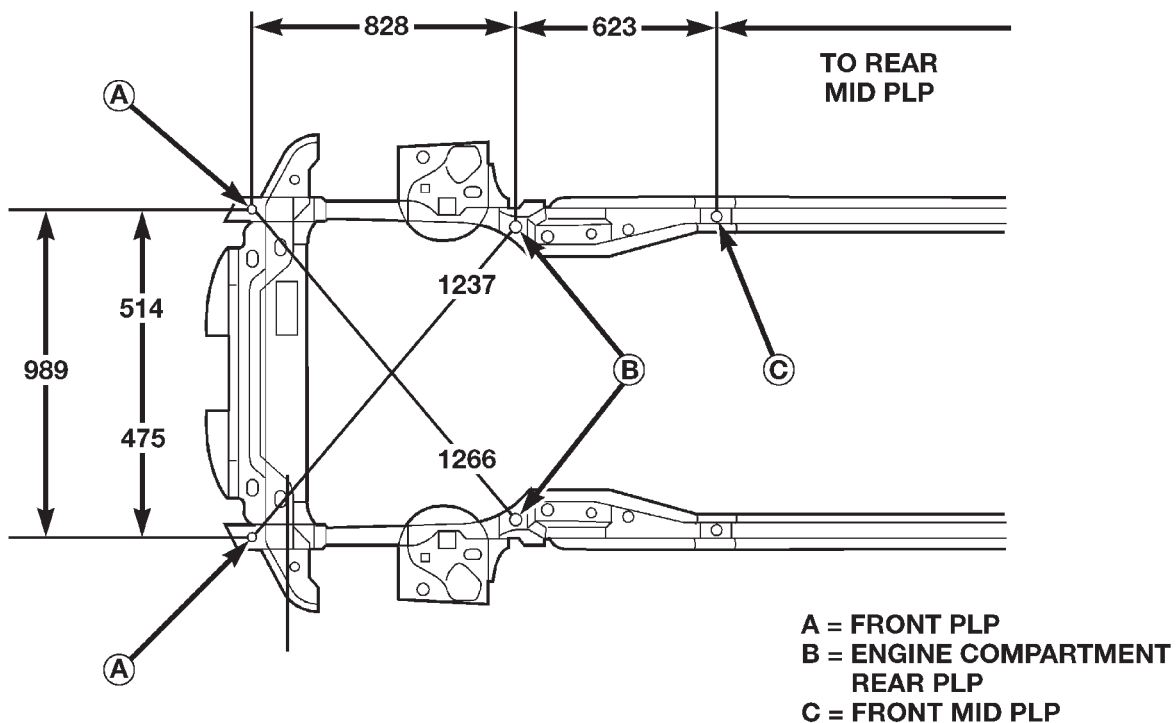
SPECIFICATIONS (Continued)



A = BOTTOM OF EXTENSION
 B = BOTTOM OF RADIATOR CLOSURE
 C = ENGINE COMPARTMENT REAR PLP
 D = PLP

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Fig. 11 Engine Compartment Side View

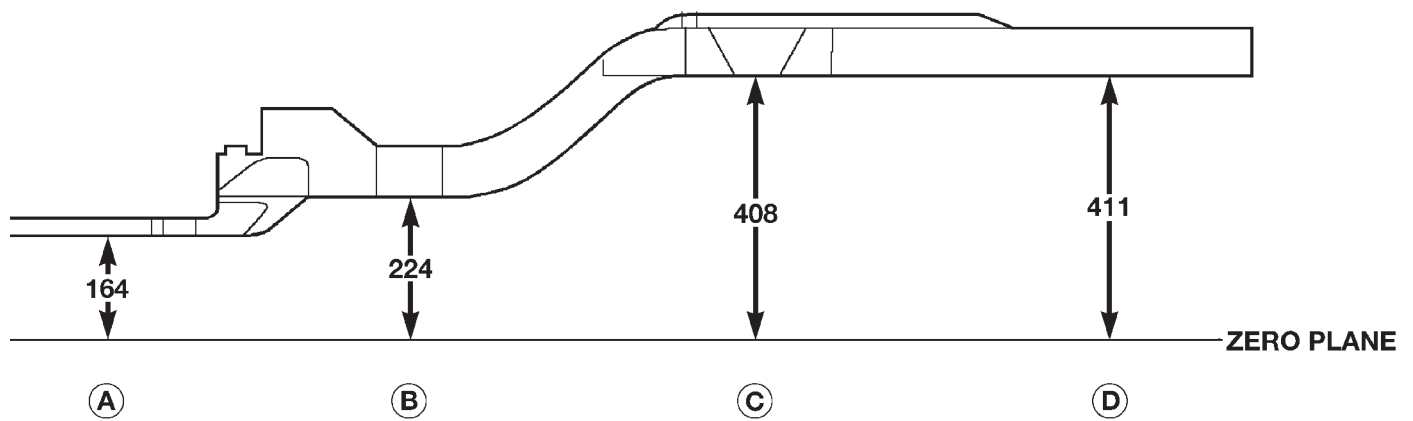


A = FRONT PLP
 B = ENGINE COMPARTMENT
 REAR PLP
 C = FRONT MID PLP

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Fig. 12 Forward Frame Section Bottom View

SPECIFICATIONS (Continued)

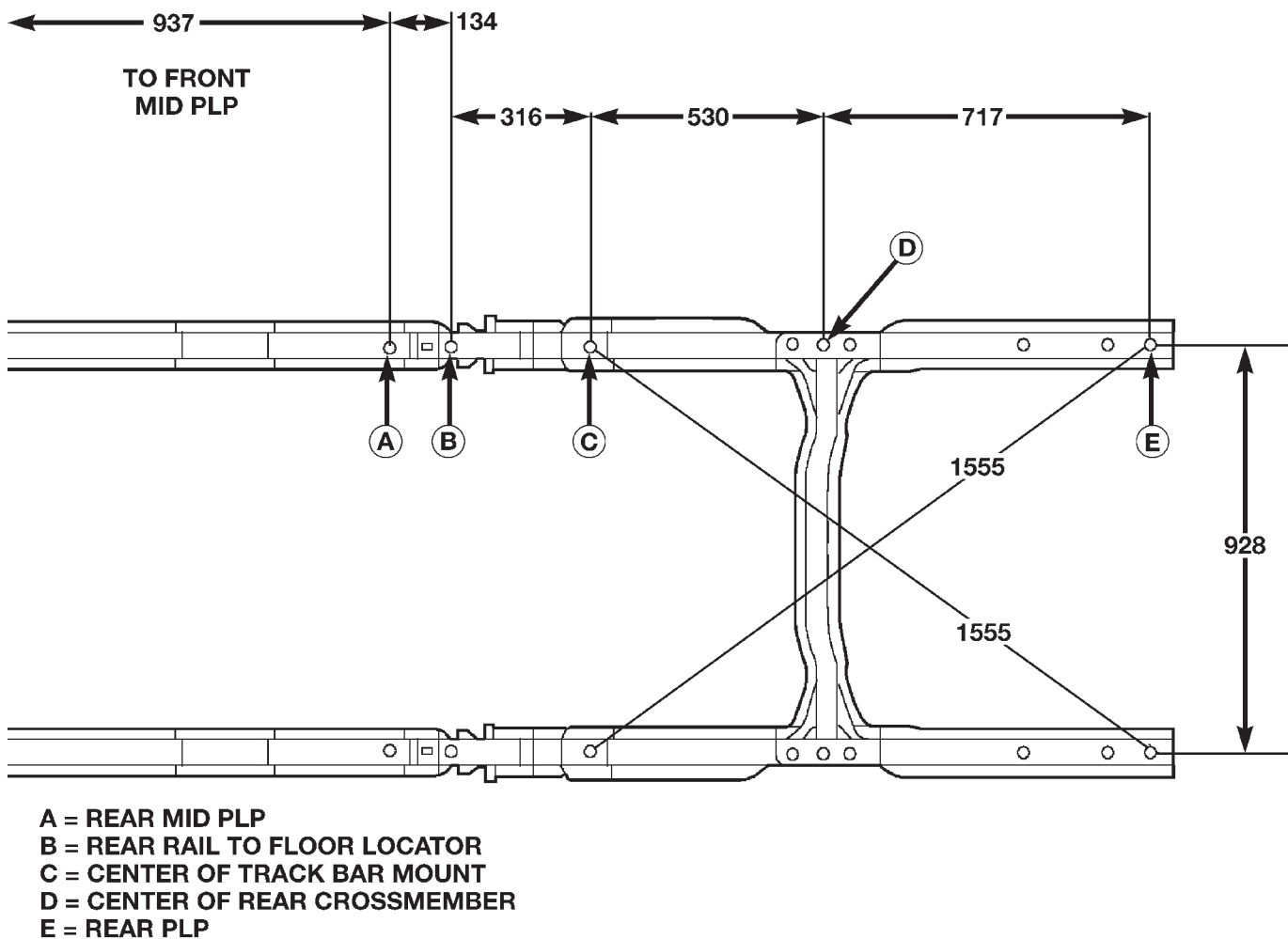


A = REAR MID PLP
B = CENTER OF TRACK BAR MOUNT
C = CENTER OF REAR CROSSMEMBER
D = REAR PLP

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Fig. 13 Rear Frame Section Side View

SPECIFICATIONS (Continued)



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Fig. 14 Rear Frame Section Bottom View

