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GENERAL

The information included in this section is based on introductory information for MINI vehicles sold in the USA and Canada. The content provided here is intended to serve as a product familiarization guide. Note that the information presented is subject to change and should be used as a general reference only.

WARNING—

- Always check the MINI factory repair information or the publisher's website at www.bentleypublishers.com for information that may supersede any information included in this section.

PRODUCT OVERVIEW

- ◀ The MINI Cooper was introduced in model year 2002 in coupe form with a 1.6 liter engine and front-wheel drive.





- The MINI Cooper's distinctive styling and clean lines are modern, yet the classic original Mini is clearly recognizable in the design. The wheel at each corner design with very little overhang, for example, is more than a styling feature: It gives the car a dynamic advantage. The layout provides excellent road handling, making the MINI both inherently safe and also fun to drive.

From the front, the shape of the hood and the large round headlights give the MINI Cooper its characteristic face. The large, deeply drawn hood is a masterpiece of design and engineering as it sweeps seamlessly down to the wheel arches.

From the rear, the car has the Classic Mini lines, with an extremely short tail, a steeply rising side section and the characteristic taillights. Additionally, the flared wheel arches, wide track and horizontal lines add to the low road-hugging look.

2005 model year changes

2005 saw the debut of the MINI convertible and all models received a modest facelift.

- The new look entailed both front and rear light redesigns, including new xenon headlights and LED rear lighting.

Additional visual changes included:

- Rod antenna standard; for satellite, telephone and radio functions (shark fin discontinued)
- Larger interior rear mirror
- Anthracite headliner (dark grey)
- New storage areas under toggle switches and parking brake
- Clock moved from headliner to beside odometer
- Larger rear cup holder
- Extra sun visor on driver side
- Optional chrome package
- Dashboard redesigned from a 5 piece unit to a 3 piece one. There was also an optional gauge package offered.



POWERTRAIN



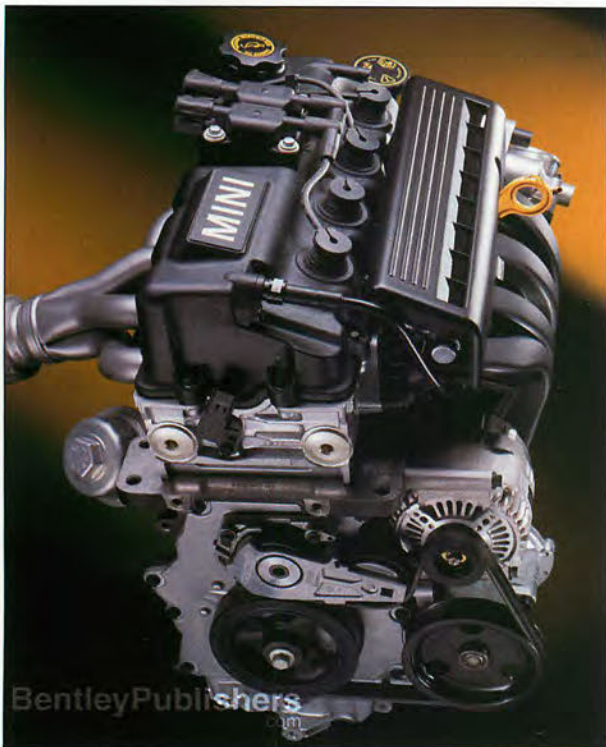
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Engines

- MINI Cooper is powered by a four-cylinder, 1.6 liter, 16-valve engine producing 115 hp, with a 0 - 60 mph time of 8.5 seconds and a top speed, where allowable, of 126 mph. The MINI Cooper comes with a 13-gallon fuel tank, bigger than all similar sized cars, and offers a driving range of up to 500 miles.

The MINI Cooper engine has an overhead camshaft, four valves per cylinder, and hydraulic valve adjustment elements. The cast iron engine block ensures low levels of noise and vibration. The cylinder head is aluminum.

The engine is managed by a Siemens control unit (EMS 2000). This unit controls the drive-by-wire throttle.

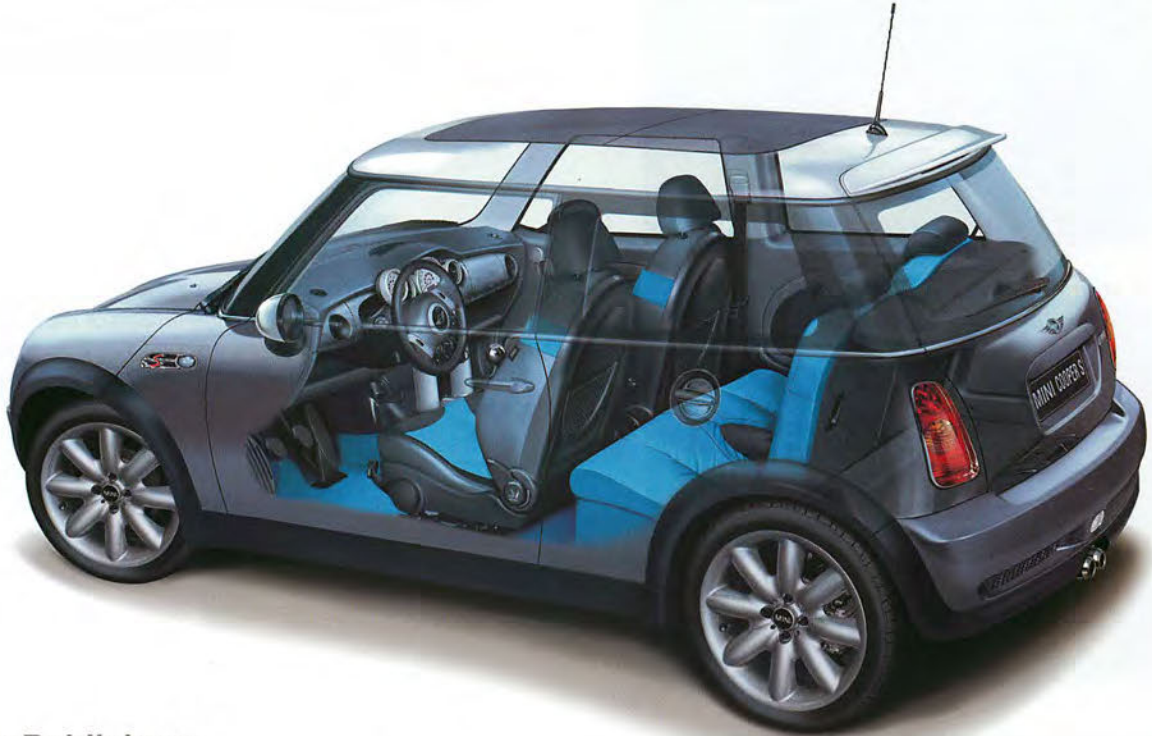


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BODY INTERIOR

The car's interior has been engineered to provide outstanding ergonomics, comfort and safety.



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Modern materials such as aluminum tone facings on the dashboard add to the design. All instruments are framed in silver and have concave anti-reflective glass.

The MINI Cooper tachometer is placed on the steering column in front of the driver to maintain the sporty emphasis. If navigation is ordered, the speedometer is moved to the steering column and located next to the tach, with the navigation screen placed centrally on the dashboard. The dashboard also featured an air-conditioned glove box.

A hi-fi CD sound system was standard equipment. A Harman Kar-don speaker system with digital sound was offered as an option. Other options included a multifunction steering wheel, rain sensor windshield wipers and navigation system.

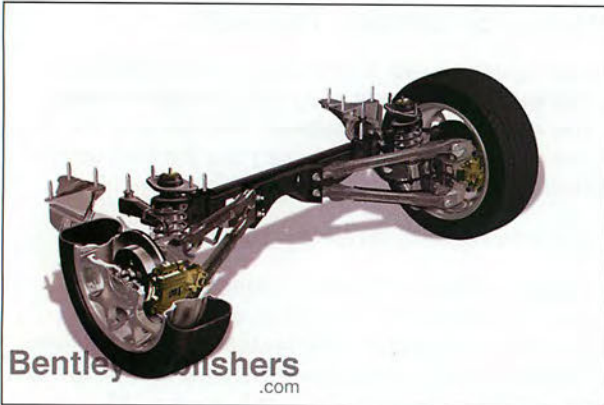
Toggle switches echo the switch gear of the original Mini.

Safety

Passive safety includes six standard airbags, including front and side airbags. Additionally, BMW Group's AHPS-2 (Advanced Head Protection System) is also fitted. This system features side impact head protection airbags. Further enhancing the car's active safety, anti lock brakes (ABS) are standard with dynamic stability control (DSC) and xenon headlights available as options.



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➤ The multi-link rear suspension is used on all MINI models, making it the only car in its class to use such a sophisticated system. Benefits of this suspension are the exceptional handling characteristics and ride comfort, with good acoustic properties.

Advantages of MINI rear suspension

- Firm and responsive
- Rear passenger comfort
- Noise optimization

MINI CONVERTIBLE

The MINI Convertible was introduced in 2005 in both the MINI Cooper and the MINI Cooper S.

To enhance the chassis of the MINI Convertible, the floor and side sills are reinforced with larger and sturdier components, primarily through the use of additional lower B-pillar crossbars and floor pan stiffeners. High strength door beams are also incorporated into the vehicle structure to help reduce intrusion into the passenger compartment during a side impact.





- High strength aluminum roll-over hoops behind the rear seats along with a reinforced A-pillar windshield surround help to protect occupants in the event of a roll-over. Through these additional reinforcements, the Convertible offers a high level of passenger protection while retaining exceptional driving dynamics.

The MINI Convertible features a fully automatic roof with a unique integrated power sliding sunroof function.

The sliding sunroof is designed with a rigid panel under the first section of the canvas top. When the top button is first pressed, the section slides back along the top rails to create an opening overhead of 16 inches. The sliding sunroof can be operated while the vehicle is in motion up to speeds of 75 mph.

The MINI Convertible roof opens in just over 15 seconds, without the manual release of any latches and can be controlled by the remote locking system. Powered by an electro-hydraulic system, the top's frame mechanism automatically unlatches and retracts. The four side windows lower automatically as the soft top folds neatly to the rear.

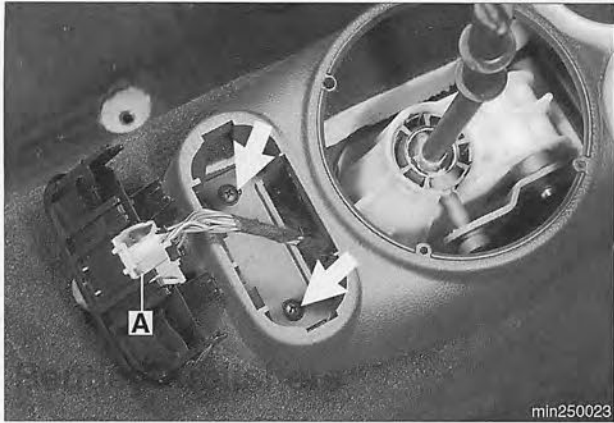
The Z-shaped folding mechanism lets the roof fold compactly to store behind the rear seats. There is no need for a tonneau cover because the front section of the roof provides protection when the soft top is down.

The MINI Convertible top comes standard with a heated glass rear window. The top is available in three colors, blue, black and green.



250-4 Gearshift Linkage

Transmission Gearshift

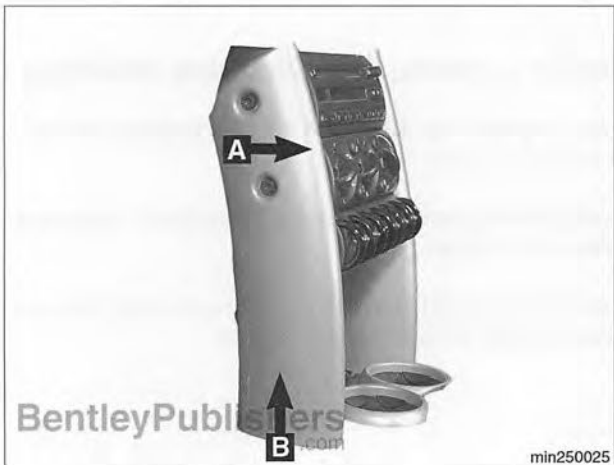


➤ Gently pry switch plate up and remove electrical connections (A) for power mirrors and heated seats (if applicable).

— Remove screws (arrows) in base of console.



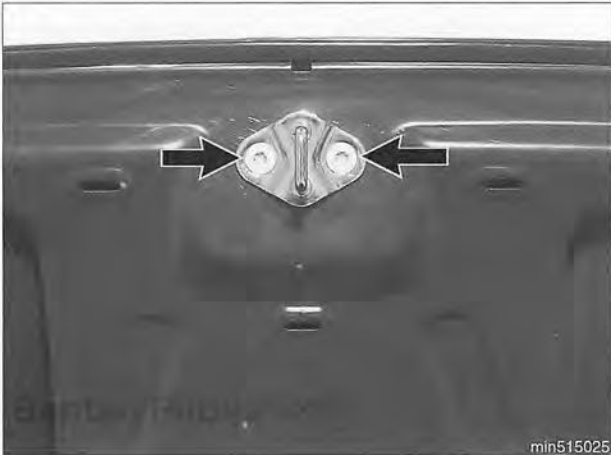
➤ Remove screws (A) on side fascia and pull fascia down slightly. Repeat for other side fascia.



➤ Slide center console and side fascia (A) back as a unit until both side fascia can be pulled out of console (B).

— Remove electrical connectors from power/lighter socket and remove center console.

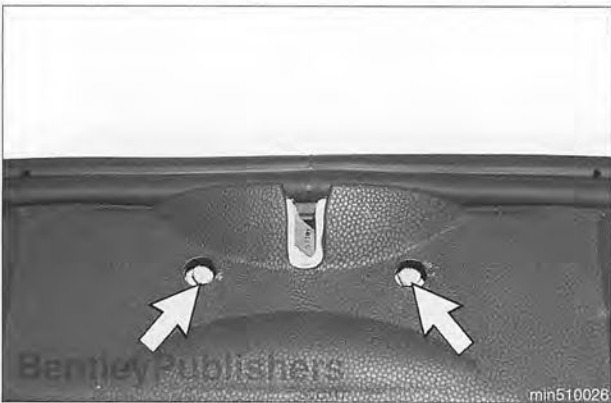
— Installation is reverse of removal. Make sure foam blocks at base of fascia are correctly positioned, and that no electrical wires are pinched or damaged when replacing console.



Rear hatch lock striker, removing and installing

- Open rear hatch and remove hatch lower trim panel. See 412 Rear Hatch.
- Working at bottom of hatch, remove striker mounting Torx screws (arrows). Remove striker.
- Installation is reverse of removal.

Tightening torque	
Hatch lock striker to hatch	6 Nm (4 ft-lb)



Rear hatch lock, adjusting

- Prior to adjusting rear hatch lock, make sure hatch is aligned correctly. See 412 Rear Hatch.
- Twist hatch rubber buffers until they bottom out.
- Working at rear hatch sill trim, pry out hatch lock mounting bolt trim plugs.
- Loosen lock mounting bolts (arrows) so that lock can just slide.
- Close hatch while holding hatch release switch (on handle strip) depressed to prevent lock from engaging.
 - Allow hatch lock to adjust itself correctly.
 - Open hatch and tighten lock mounting bolts.

Tightening torque	
Hatch lock to body	10 Nm (7 ft-lb)

- Recheck hatch and hatch lock, repeating procedure if necessary.
- Adjust rear hatch rubber buffers for correct body aperture. See 412 Rear Hatch.

NOTE —
Do not overextend rubber buffers as this can cause rear hatch to close with difficulty or not at all.

Front seat options

Standard seating covering is cloth or leatherette. Leather is an option in all models.

Lumbar adjustment is offered as an option on Sports seats.

Front seat heating, if equipped, is activated by the seat heating switches, housed in the center console. When seat heating is activated the LED in the switch illuminates.

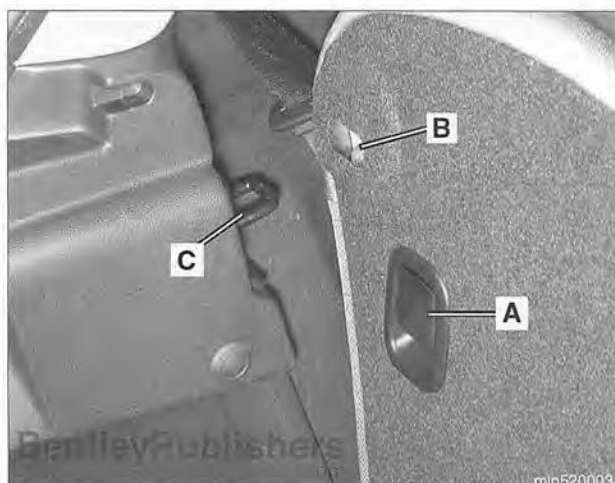
Rear seat

The rear seat cushion is one piece. The folding backrest is 50 / 50 split.

Rear seat backrest operation

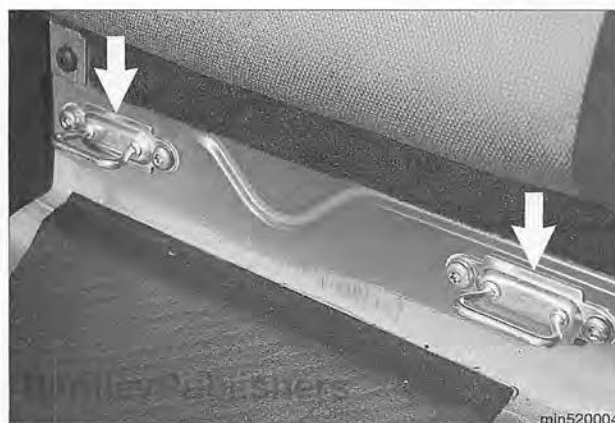
- Rear seat backrest may be folded horizontally by releasing lock handle (A) in the rear face of the backrest, accessed through the cargo compartment.

The rear seat lock (B) is in the seat backrest and the striker (C) is secured to the body.

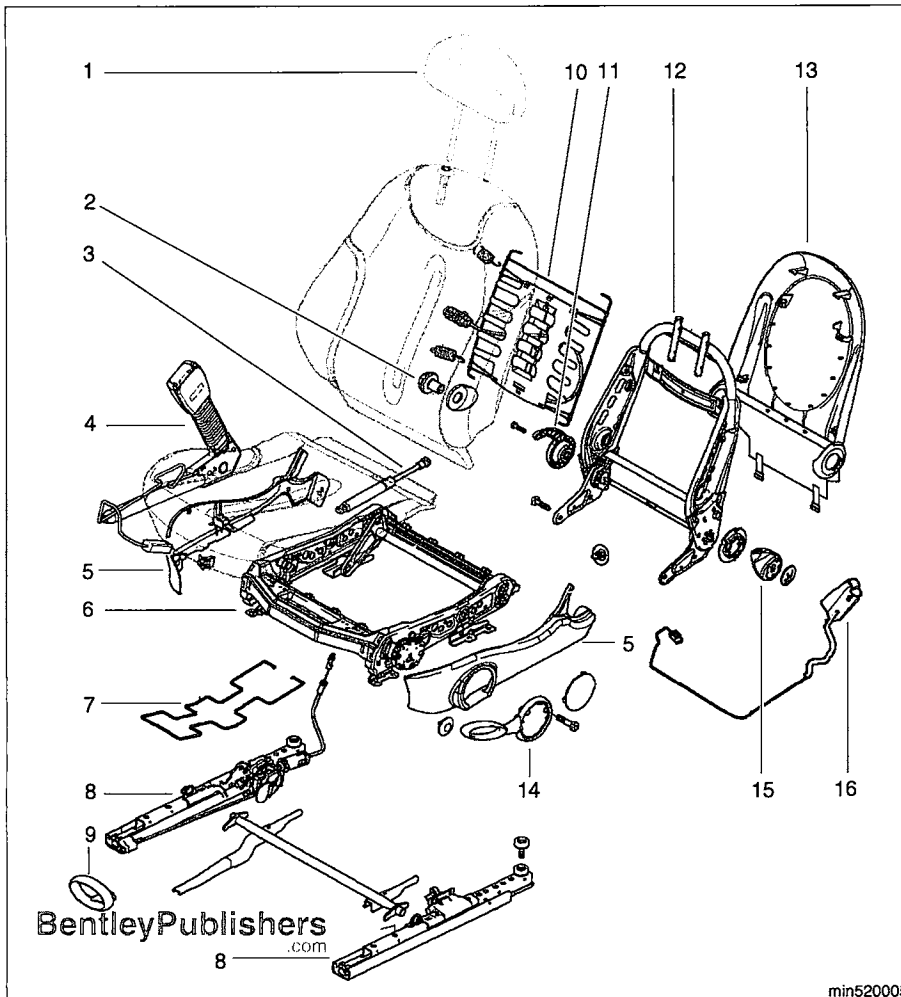


Child safety seat anchors

- The MINI is equipped with anchors (arrows) under the rear seat cushion for child seat retention. The anchor brackets are accessed through trim plugs in the rear of the seat cushion.



FRONT SEAT COMPONENTS



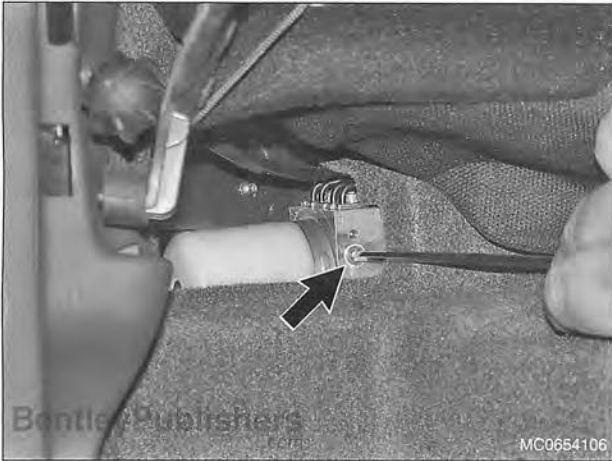
1. Headrest
2. Lumbar support adjuster knob
3. Seat height control air spring (left seat)
4. Pyrotechnic seat belt pretensioner (buckle)
5. Plastic trim
6. Seat cushion frame
7. Seat cushion spring
8. Seat rail
9. Fore-aft control handle
10. Backrest spring
11. Backrest angle control handle
12. Backrest frame
13. Rear panel
14. Seat cushion height handle (left seat)
15. Easy rear seat entry handle
16. Airbag

Front seat, removing and installing

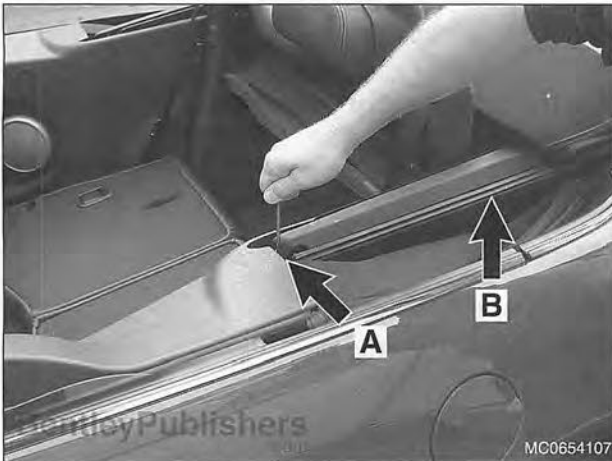
WARNING—

- The front seat is equipped with both an airbag and a pyrotechnic seat belt pretensioner.
- The airbag is inflated by an explosive device. Handled improperly or without adequate safeguards, it is very dangerous. Observe special precautions prior to any work at or near the airbags. Read the warnings and cautions in **721 Airbag System (SRS)**.
- The pyrotechnic seat belt tensioner is a powerful device. Handle with extreme care. Incorrect handling can trigger the tensioner and cause injury.

- Switch off ignition and remove ignition key.
- Tilt and move front seat forward as far as possible.



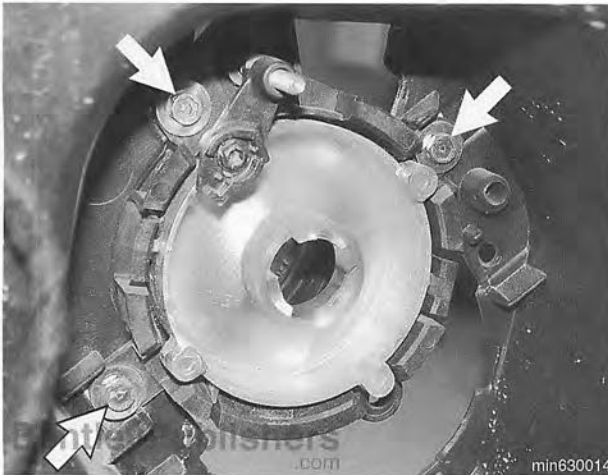
- Using a screwdriver or hex key (Allen wrench) from the vehicle tool kit, turn valve screw (**arrow**) on the hydraulic pump $1\frac{1}{2}$ turns counter-clockwise. Remove tool.



- Depending on vehicle model year, it may be necessary to release convertible top from the down-locks.
 - Press lever (**arrow A**) with hex key (Allen wrench) or screwdriver to release top and lift side frame up (**arrow B**).
 - Hold frame slightly upward or insert a tool into frame to prevent lock from re-engaging.
 - Repeat for other side.



- With the help of a second person, use both hands on side frames and pull convertible top up and forward out of stowed position on each side (**arrows**). Pull forward to approximately the open sunroof position.
- Working inside the vehicle and with the convertible top at the open sunroof position, carefully pry off trim cover from middle of large center bow of convertible top frame. Unclip forward section of cover and pivot to the rear to remove.

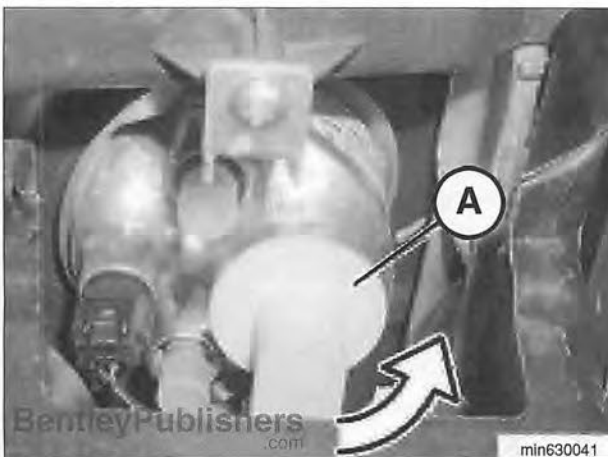


➤ Remove screws (**arrows**) and remove foglight assembly.

- Installation is reverse of removal. If necessary, adjust foglight. See **Foglight aim, adjusting** in this repair group.

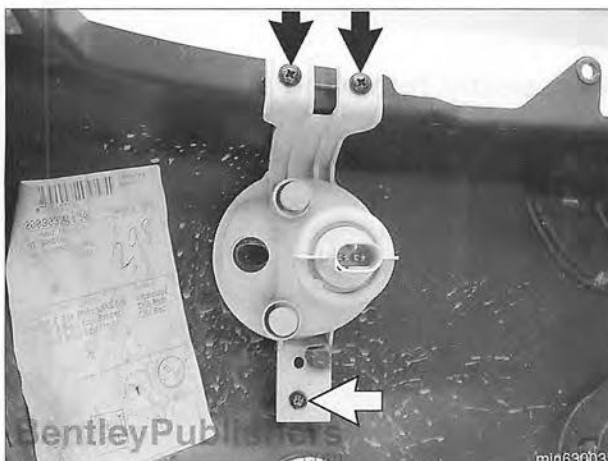
Front turn signal bulb, replacing

- Open front hood.
- Reach into the opening for the turn signal indicators from above and rotate bulb holder (**A**) in direction of **arrow** to remove.
- Remove and replace bulb.



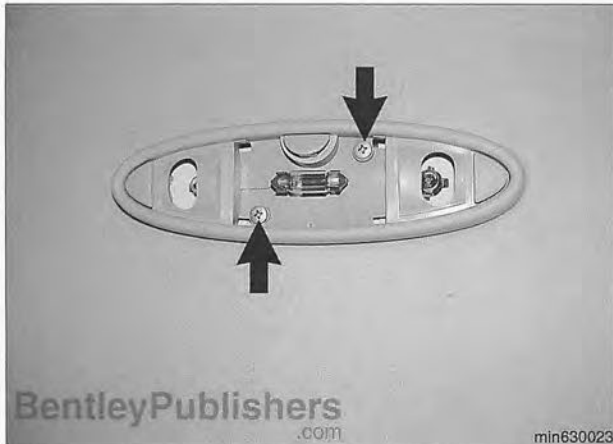
Front turn signal assembly, removing

- Remove front bumper cover. See **510 Exterior Trim, Bumpers**.
- Working on inside of bumper cover, remove screws (**arrows**) and remove signal light assembly.



630-16 Lights

Interior Lights

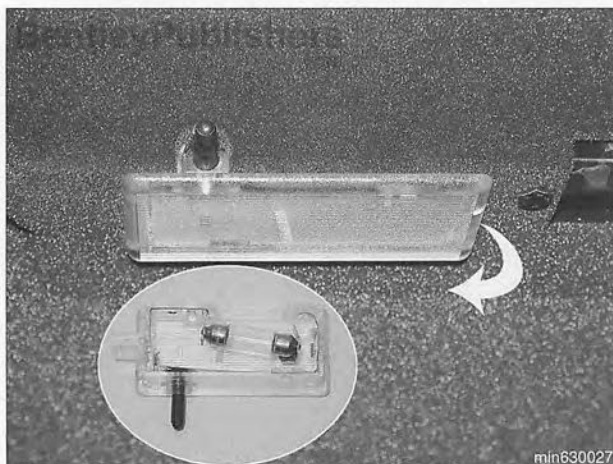


- Remove screws (**arrows**) holding light module to headliner.
- Release electrical connector from back of module and remove ceiling light.



Footwell light, removing

- Use a plastic prying tool to release footwell light from footwell trim.
- Release electrical connector and remove footwell light.



Glove compartment light, removing

- Use a plastic prying tool to release glove compartment light from glove compartment.
- Release electrical connector and remove light.

