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BMW 3-Series and Z4 (99-05) Includes 2006 325ci/330ci Coupe and Convertible models Haynes Online Manual.

30 Convertible top - general information

Note:

This information is general in nature, as it is intended to apply to all vehicle types, years and models.

Adjustments

Note:

The following are typical adjustments. Some of these adjustments may not be provided for on your vehicle.

Latches

The latches secure the convertible top frame to the upper edge of the windshield frame. If the latches are too loose, the top will rattle and move side to side. If the latches are too tight, they will be difficult or impossible to secure. The hooks on some latches are threaded so they can be screwed in or out to tighten or loosen the latch; pliers are often necessary, so make sure you protect the finish of the hook with a rag. Other latches have set-screws that lock the hooks in place - loosen the set-screws (usually with an Allen wrench), position the hooks as desired, then tighten the set-screws.

Also keep in mind that weatherstrip is attached to the front edge of the top. As this weatherstrip deteriorates over time, it will cause the latches and the front edge of the convertible top to become loose. The proper fix for this problem is to replace the deteriorated weatherstrip, which will also reduce wind noise.

Assist springs

Assist springs are attached between the rear of the top framework and the vehicle body. The springs allow the top to be raised and lowered slowly and evenly, without excessive effort in either direction. If the springs are too loose or too tight, they can cause the top to move very quickly in one direction and very slowly in the other direction. Often, the springs can be loosened or tightened by turning threaded adjusters. The springs are sometimes difficult to locate, especially when they travel into the trunk area or are covered by fabric. Search along the rear portion of the framework and remove any access covers.

Some newer vehicles use gas-filled assist struts in place of springs. These struts are similar in design to the gas-filled support struts used to raise and support the hood on many newer vehicles. While these struts are not

adjustable, they do lose their gas charge over time and become less effective. Replace the struts if they are not doing their job.

Center joint

On most vehicles, the center joints of the top framework can be adjusted to align the top weatherstrip with the side windows. This adjustment also slightly affects the forward “reach” of the top. The center-joint adjustment changes the angle between the forward and rear sections of the top framework at each side.

To visualize this adjustment, imagine a standard, flat door hinge lying flat on a table top. If you grasp the hinge on each side at its center pivot and lift slightly, the hinge will flex and appear as an arch, with only its ends touching the table - this also shortens the overall length of the hinge. In this analogy, the hinge plates are the front and rear framework sections and the lifting of the center pivot is the center-joint adjustment.

To make this adjustment, it is usually necessary to position the top at approximately its mid-point between raised and lowered. The adjustment mechanism is located at the joint between the front and rear frame sections on each side. The adjuster usually looks like a notched wheel with a set-screw that secures it in position, although some adjusters are a simple screw-and-locknut setup. Mark the position of the adjuster (in case you have to return to the original setting), then loosen or remove the set-screw or locknut. Rotate the wheel or screw, which will sometimes require an Allen wrench. Usually, you'll make the adjustments in the same small increments, side-to-side, until the correct adjustment is achieved. Raise and lower the top after each small adjustment to check alignment.

If the top alignment is not equal side-to-side (compare the alignment of the top to the upper edges of the side windows on each side), adjust one side more than the other to get the proper adjustment.

Adjusting the center joints also changes the height of the top's front edge, so it is usually necessary to adjust the control link after making a center-joint adjustment.

Control link

This adjustment affects both the forward “reach” of the top and the height of the front edge of the top (how high it sits above the windshield frame before the latches are secured). The control link is located at the rear of the top assembly, usually near the main pivot point. Various methods are used to provide adjustment at the control link, such as slotted mounting screw holes and wheel-type adjusters.

With the top down, locate the adjusters, mark their positions, then remove the set-screws or loosen the mounting bolts. Raise the top, then move the adjusters to provide a slight gap between the front edge of the top and the window frame. Walk all around the vehicle to make sure the adjustment is even from side to side. If it is not even, adjust the low side up until it is even. When adjustment is complete, tighten the set-screws or mounting bolts.

Front frame

Some models have separate framework at the forward end of the top assembly that is adjustable by virtue of slotted mounting bolt holes. If, after all other adjustments are carried out, the alignment pins on the top are too far forward or backward to properly engage the holes in the windshield frame, adjust the frame as follows:

Retract the top part-way, loosen the bolts, slide the framework evenly forward or backward, tighten the bolts, then raise the top and check alignment again. Repeat this process until correct alignment is achieved.

Power-top troubleshooting

Power tops are operated by six hydraulic cylinders. The cylinders receive hydraulic pressure from an electric motor/pump assembly that is mounted in the trunk, behind the left-side trim panel. When the switch is pressed to raise the top, the motor drives the pump in a direction that sends hydraulic pressure to the bottom end of each hydraulic cylinder (storage compartment cover, convertible frame, etc.), driving the pistons out of the cylinders, which raises the top. When the switch is pressed to lower the top, the motor turns in the opposite direction, sending hydraulic pressure to the top of each cylinder, driving the pistons down and lowering the top.

As a first step in troubleshooting, listen for the whirring sound of the motor as the switch is pressed. If there is no sound from the motor, refer to *Electrical Troubleshooting* in [Chapter 12](#). If you can hear the motor running but the top does not raise, proceed to *Hydraulic/mechanical troubleshooting* as follows:

Hydraulic/mechanical troubleshooting

Mechanical and hydraulic problems will cause the top to not open (or close) or to get stuck part-way through the process. If the motor is operating normally, there are generally two possible causes for these problems: 1) A hydraulic system malfunction (low fluid level, air in the system, inadequate pump pressure) or 2) A mechanical binding in the top framework.

Hydraulic system fluid level check

Locate the hydraulic motor/pump behind the left-side trim panel in the trunk. On the side or end of the motor/pump assembly will be a screw-type check plug. Place rags underneath the check plug. Unscrew the plug and verify the fluid level is within 1/4-inch of the bottom of the check-plug hole (the procedure is very much like checking differential fluid level). If necessary, add fluid through the check-plug hole to bring the fluid level to normal. Check your owner's manual, BMW dealer or local auto parts store for specific fluid recommendations. If you find a low fluid level, check for leaks at the pump, hoses and hydraulic cylinders.

Hydraulic system bleeding

Air can get into the hydraulic system through leaks and if the fluid level is too low. Air in the system will generally cause excess noise and, in extreme cases, will cause the top to raise or lower only part-way.

To bleed the hydraulic system, first check the fluid level, then start the engine and raise and lower the top. If the fluid has excessive air, the top might not raise or lower, so you will need an assistant to hold the switch while you raise and lower the top slowly by hand. Raise and lower the top several times to work out all the air. Check the fluid level again, since it will likely drop as the air is expelled.

Checking for binding

If the hydraulic system seems to be operating properly, disconnect the hydraulic cylinders from the top framework and operate the top by hand. The top should go up and down smoothly, without excessive effort. If

the top binds during manual operation, make sure all adjustments are correct and spray penetrating lubricant on all framework joints.

If the top is operating smoothly during manual operation but will not raise properly with the hydraulic cylinders connected, suspect a pump/motor assembly that is not providing adequate pressure.

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