

INSTALLATION INSTRUCTIONS

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# 4981

# **DRIVELINE SPACER** INSTALLATION INSTRUCTIONS

# Thank you for being selective enough to choose our high quality BELLTECH PRODUCT. We have spent many hours developing our line of products so that you will receive maximum performance with minimum difficulty during installation.

- Note: Confirm that all of the hardware listed in the parts list is in the kit. Do not begin installation if any part is missing. Read the instructions thoroughly before beginning this installation.
- **DO NOT** work under a vehicle supported by only a jack. Place support stands securely under Warning: the vehicle in the manufacturer's specified locations unless otherwise instructed.
- DO NOT drive vehicle until all work has been completed and checked. Torque all hardware to Warning: values specified.
- Proper use of safety equipment and eye/face/hand protection is absolutely necessary when Reminder: using these tools to perform procedures!
- It is very helpful to have an assistant available during installation. Note:

#### **RECOMMENDED TOOLS:**

- Properly rated floor jack, support stands, and wheel chocks •
- Combination wrench set
- Torque wrench: 0-75 lb ft. range •
- Ratcheting socket wrench and sockets sets •
- Pry Bar •
- Safety Glasses

## **KIT INSTALLATION**

- 1. Open the hardware kit and remove all of the contents. Refer to the part list (Page 3) to verify that all parts are present.
- 2. Park the vehicle on a smooth, level concrete or seasoned asphalt surface and activate the parking brake. Block the FRONT wheels of the vehicle with appropriate wheel chocks; making sure the vehicle's transmission is in 1<sup>st</sup> gear (manual) or "Park" (automatic).
- 3. Using a properly rated floor jack, lift the rear wheels of the vehicle off the ground. Place support stands, rated for the vehicle's weight, and in the factory specified locations. Refer to the vehicle Owner's Manual. Prior to lowering the vehicle onto the stands, make sure the supports will securely contact the chassis.

! It is very important that the vehicle is properly supported during this installation to prevent personal injury and chassis damage! Make sure that the supports stands are properly placed prior to performing the following procedures. We DO NOT RECOMMEND using wheel ramps while performing this installation.

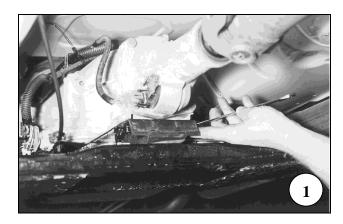
4. Slowly lower the vehicle onto the stands and, before placing the vehicle's entire weight on them, again check that they properly and securely contact the chassis as described above. Check for possible interference with any lines, wires, cables, or other easily damaged components.

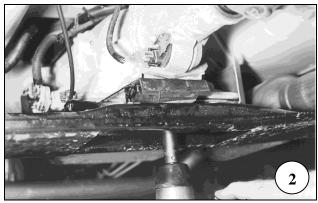
- 5. This kit is designed to work in conjunction with the Belltech hanger and shackle kits and is intended to reduce universal joint working angles that may occur as a result of the installation of the hanger and shackle kit. During the installation of this kit, there will be instances where the kit does not supply all the hardware that will be removed and re-installed during kit installation. We leave the responsibility for replacement of worn or damaged non-supplied hardware to the installation personnel.
- 6. Install the transmission spacer by removing the two 10mm bolts that secure the transmission housing to the transmission rubber mount (Photo 1). Also to be removed is the transmission mount nut that secures the transmission mount to the vehicle cross member (Photo2).
- With a lifting device rated for this load, elevate the rear of the transmission to allow removal of the transmission mount. CAUTION: Do not elevate the rear of the transmission beyond the point necessary to remove the transmission mount as transmission components may be damaged (Photo 3).
- **8.** Install the kit supplied 55mm long bolts, with a washer under the bolt head, into the holes in the transmission mount (Photo 4). Install the square tubing spacer over the bolts (Photo 5).
- 9. Re-install the transmission mount with the spacer and bolts as an assembly. Start the bolts and nut to their respective threads before tightening any of the hardware. Lower the transmission back onto its mount and torque the transmission bolts to 20-25Ft-lbs. And the transmission mount nut to 35-40Ft-lbs. (Photo 6). NOTE: A thread-locking agent, such as Loc-tite, should be applied to the transmission bolts before installation.
- 10. Unbolt the drive shaft center carrier bearing from the vehicle cross member. Slide the drive shaft assembly to one side of the cross member. Using the kit-supplied template, mark off the appropriate area on the cab under the floor cross member just forward of and above the center carrier bearing cross member (Photo 7 & 8). Cut out the marked area using a Sawz-all, plasma cutter, or suitable tool (Photo 9). CAUTION: Always wear eye protection when using power tools.
- **11.** Raise the center carrier bearing and install the kit supplied box-tubing spacer with the long axis between the center carrier bearing and the vehicle cross member (Photo 10). Secure these pieces in place using the kit supplied 7/16" hardware. Torque this hardware to 15-20Ft-lbs. (Photo 11).
- 12. Raise the rear of the vehicle with a jack rated for this load. Place jack stands rated for this load under the frame rails just forward of the rear leaf spring pack forward hangers. Lower the vehicle down onto the jack stands and check for vehicle stability. Remove the wheels and tires and unbolt the lower shock absorber mounts. NOTE: In the interest of maintaining rear axle to leaf spring pack integrity, we recommend that the following operations be performed on only one side of the vehicle at a time.
- **13.** With a jack rated for this load supporting the rear axle tube, remove the leaf spring pack-to-axle housing tube U-bolts. Lower the rear axle housing clear of the leaf spring pack.
- 14. Clamp the leaf spring pack together using "C" clamps, or a suitable tool. Remove the OEM leaf spring pack center bolt and install the kit supplied leaf spring center bolt and nut. Install the bolt from the topside of the leaf spring pack. Torque the nut 55-60Ft-lbs. (Photo 12, 13 &14). Place the kit supplied 2° shim, against the leaf spring pack over the leaf spring nut and trim the nut so that only ½" of the nut extends through the shim (Photo 15).
- **15.** Locate the kit supplied tapered shim on the rear axle housing leaf spring pad. The thicker portion of the shim should be toward the front of the vehicle (Photo 16). Raise the rear axle housing so that the leaf spring pack center bolt nut is located in the axle housing tube spring pad hole and the shim is captured between these parts with the cutout in the shim butted against the spring center bolts nut (Photo17).

- 16. Install the spring plate, U-bolt nuts and washers. **DO NOT** tighten the U-bolt nuts and washers. **DO NOT** tighten the U-bolts to final torque at this time.
- **17.** Repeat Steps 8 thru 11 for the remaining side of the vehicle.
- **18.** Torque the U-bolt nuts to 85-100Ft-lbs. (Photo 18)
- **19.** Re-install the lower shock eye hardware and torque to 81Ft-lbs.
- 20. Re-install the wheels and tires and torque the lug nuts to 85-90Ft-lbs.
- 21. Lift the vehicle and remove the support stands. Carefully lower the vehicle to ground.
- **22.** Immediately test-drive the vehicle in a remote location so that you can become accustomed to the revised driving characteristics and handling. Be aware that the vehicle will handle substantially different now that it has been modified.
- **23.** Installation is complete. Check <u>all</u> of the hardware and re-torque at intervals for the first 10, 100, 1000 miles.

PART#	DESCRIPTION	QTY
6925-010	Spacer, 1" x 2" Cross drilled	1
110252	3/8-24 x 5" Spring Center Bolt	2
110257	38/-24 x 1-1/8 Coupling Nut ZP	2
110313	7/16-20 x 3" NF GR8 CS ZP	2
110303	7/16-20 GRD C LN ZP	2
110645	7/16 SAE FW ZP	4
6500-010	Trans Spacer 1" x 1"	1
4975-001	2° Pinion Shim	2
111054	10-1.5 x 55mm Metric Bolt	2
110625	3/8" A325 F/W ZP	2

## PART LIST FOR 4981 DRIVELINE SPACER





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