

URGENT

ROUTINE

MANDATORY

INFORMATION

Service Bulletin

DATE April 1, 1983

RVS 001

NUMBER

GROUP

ATTENTION: SERVICE MANAGERS AND OWNERS

17

Description:

This bulletin provides the proper procedure for aligning the critical center line between transmission and differential.

In addition to periodic maintenance utilizing this procedure will aid in preventing drive line vibration and/or subsequent early failure, high wear, and loss to drive line components.

Instructions:

Before proceeding, clean and inspect all drive line components, yokes, seals etc. Check tri-union caps on spider and bearing assembly (U-Joints) for excessive looseness or side play. Replace those components that are excessively worn or defective.

(Important): Drive line U Joints require regular lubrication maintenance, every 3000 miles or 3 months pursuant to usage. Apply grease to fitting at each universal joint. Do not forget propeller shaft assembly. Use hand gun only no high pressure equipment. This may blow out seals. Use multipurpose grease, NLGI Grade 2 EP.

It is then necessary to determine if drive line is properly indexed. (This is necessary because the engine is canted in the coach with respect to the drive train) See figure (1) page two

*NOTE: It is imperative that the parking brake be applied and all wheels blocked before proceeding

A: Transmission-to-Differential Propeller

Shaft Removal. To remove the transmission-to-differential propeller shaft, proceed as follows:

1. Remove four bolts attaching the aft end of shaft spider/bearing to the coupling on the parking brake drum; retain bolts.
2. Support shaft assembly, and remove four bolts inserting through the yoke on the differential into the forward spider/bearing; retain bolts.
3. Lower and remove shaft assembly.

B: While holding the propeller (or drive) shaft perpendicular to your chest, (holding the female end of slip yoke away from you) the 2 universal joints should not be lined up with each other.

C. If these U-Joints are lined up or you have any doubt they are not indexed correctly follow the procedure as outlined in C(1).

SUBJECT

Drive Line

Alignment Tool

MODEL (S)
AFFECTED

001-1050

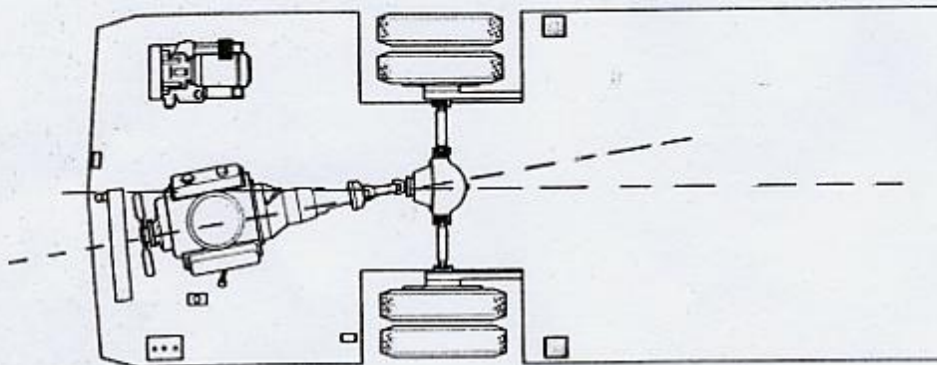
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Fig. (1) Shows inclination of engine trans package as compared to third member drive components: (indexing takes care of this problem)



- C.1. Unscrew the retaining collar at the slip yoke and pull the drive line apart (still holding it perpendicular to your chest) line up the U joints, then move male portion (the end closest to you) Two teeth to the left; install together and screw the retaining collar back on.

Now that the drive line itself is indexed correctly proceed to item (D).

D. You will notice that the (2) alignment tools enclosed, have a hole and mount pattern acceptable to the output yoke of the transmission and also the input yoke of the differential. Bolt these (2) tools to the above yokes.

E. Notice the conical tips of each tool. These should line up within 1/16" of each other in order to obtain an optimum setting.

F. If the members are out of line all adjustments are made to the crossmember placement and transmission footing.

G. In the event the transmission should be moved up or down, proceed as follows:

1. Support tailshaft of transmission with bottle jack or other similar supporting device.

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<p>* IMPORTANT: Do not proceed unless you feel you can safely support this assembly. Without any chance of damage to yourself, your coach, and/or equipment.</p> <ol style="list-style-type: none">2. Remove the two retaining bolts from the transmission foot plate to crossmember support. Using bottle jack or support device raise enough to facilitate removal or installation of shim washers. Remove or add the correct number of shims or washers between these (2) members to bring the drive line pointers even on the same line. Washer shims that have been removed may be stored at the top of the transmission foot plate (installation here will not effect alignment).3. Installation is in reverse. All bolts should be torqued to proper specs. <p>H. In the event the transmission should be moved to the right or left proceed as follows:</p> <ol style="list-style-type: none">1. Notice that the transmission cross member is resting on angle supports welded to either side frame rail. The bolt locations between transmission cross member and angle supports are slotted facilitating left and right movement.2. At times on (1) or both sides a third bolt, (Normally there are (2)); is installed in a <u>non</u> slotted hole. This was used to hold original factory alignment integrity. This bolt; bolts must be entirely removed.3. <u>Loosen only</u> the (4) bolts at the crossmember mounting and move the transmission cross-member to the left or right until proper alignment is obtained. Retighten these (4) bolts to proper specifications. The 3rd bolt as outlined in (2) may or may not be able to be installed at this time. If not, drill a new hole through both members and install as this bolt will hold your new alignment integrity. Tighten to specifications.	SUBJECT
	MODEL (S) AFFECTED

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Morgan Hill, CA 95037

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I. Torque Specifications:

U-Joint to shaft assembly	25-30 ft-pounds
U-Joint to yoke/trans	25-30 ft-pounds
U-Joint to yoke/diff	25-30 ft-pounds
Yoke to parking brake drum	25-30 ft-pounds
Nut, Yoke to Differential	150 ft pounds
Bolt, Transfoot plate to crossmember	122-133 ft pounds
Bolt, Crossmember trans to angle support at frame	50-55 ft pounds

SUBJECT

J. Remove drive line alignment tools after alignment is performed: installation of drive line is in the reverse installation: all bolts, nuts etc. on spider and bearing (universal joint) assembly do not use lock washers. Use "Loctite" or equivalent during reinstallation.

MODEL (S)
AFFECTED

(In the event you have any questions with respect to this procedure please call before accomplishing work at (408) 227-1644 or 779-3173. Ask for Ken or Jim.

As this was a non published procedure by the FMC factory, yet performed by us at the factory, we feel it is a mandatory procedure while involved in an engine, transmission or differential change, and thus the tools and procedure we are making available for purchase in the field.

RVS cannot guarantee the above procedure nor assume liability for work performed by other agencies or individuals.

Thank you.

RVS Corporation