NHTSA—File # 05V-364
TRANSPORT CANADA
File # 05-243

WARRANTY CODE INFORMATION
9250—INITIAL TRAINING TIME .6 Hr.
Onetime use per DEALERSHIP ONLY!
9251—IDT SYSTEM STANDARD REPLACEMENT T.B.D.

LIFT SYSTEM SECONDARY BRAKE INSTALLATION PROCEDURE....

For [redacted] camping trailers

NOT FUTURA Camping Trailers

1. Remove the waist-hi plastic upper and lower molded covers, located at the rear of the trailer. Unlatch all four roof latches. Place the crank for the lift system in the waist-hi receiver tube and turning the crank clockwise, raise the roof approximately 20". As a precaution, place a piece of 20" long wood under the center of each sideboard as shown in (Fig. 1).


Fig. 1

Next at each lift arm, from the outside, reach up to the top of the lift arm and determine whether or not there are any leveling screws present. When you look up around the top of the lift arm you will note that there are small holes located on the front and rear of the upper lift arm tube. (Fig. 2) If any screws are observed in these holes, please remove them. Then carefully remove the wood support.

Lift

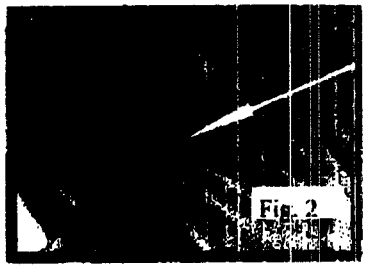


Fig. 2

2. Rotate the crank in a counter-clockwise direction, lowering the roof to a closed position, continue turning the crank until the handle stops turning. This indicates that the system has reached the lower most position.

3. Raise the camping trailer up to allow for access under the unit and place on jack stands or other suitable supports. Be sure to stabilize the unit to prevent any movement. Fig. 3


Fig. 3

4. Using a screw-gun, with a 1/2" socket, remove the two hex head screws, located on each corner, attaching the spring tubes NOTE: these screws will be re-installed into the chassis side-rail holes. Do not remove the small pan head screws above the hex bolts. (See Fig. 4 Arrow)

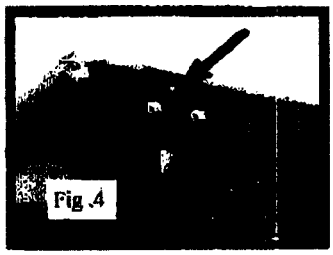


Fig .4

5. Using a screw-gun with a square bit, locate and remove the screws attaching the ends of the spring tubes to the main tube assembly. (Fig. 5 Starting at one corner pull the end of the spring tube out of the main tube assembly and then pull the outside end of the spring tube down removing the spring from the lift arm. Slide the spring tube off of the spring and liberally grease the spring from the main tube assembly up to approximately the last 24" of the spring. Re-install the spring tube on the spring, inserting the spring tube back into the main tube assembly and then insert the spring back up into the lift arm. Continue this process until all four springs have been greased.


Fig. 5


Fig. 6

Grease this area of spring

6. When all four springs tubes have been returned to their original position, re-install the hex screws to attach, the outside ends of the spring tubes to the inside of the frame rails. Use the red headed #10 screws provided in the fastener package to attach the spring tubes to the end of the main assembly tube. Fig. 7

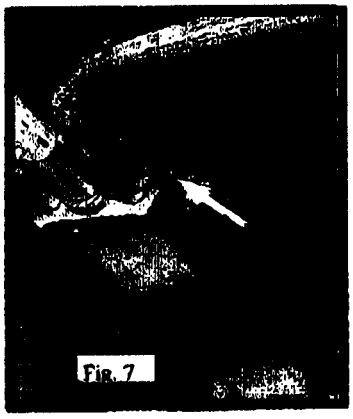


Fig. 7

7. Time to remove the drive shaft assembly. Clamp the short end of the drive shaft as close as possible to the main assembly tube using vice grip pliers or other suitable tool. (Fig. 8) This is to prevent the shaft from turning during the following process. Using the lift system crank inserted into the waist-hi receiver, turn the crank counter-clockwise until you can easily turn the drive shaft inside of the short drive shaft on the main tube assembly. This will indicate that the burrs, caused by the original fastening screws , have been smoothed over and the shaft can be removed.


Fig. 8

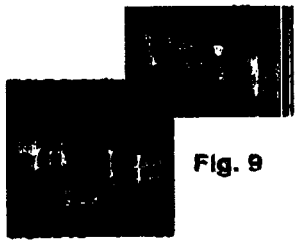


Fig. 9

8. Locate the master link in the chain and carefully unlatch the retainer clip and disassemble the master link and remove the chain from around the lower sprocket. (Fig. 9)


Fig. 10

9. Measure from the back edge of the rear bumper along the drive shaft and put a visible mark on the tube @ 4-3/4". (Fig. 11)

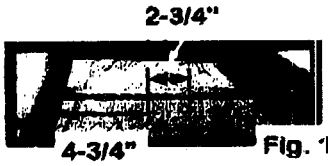


Fig. 11

10. Turn the lower sprocket by hand, counterclockwise while pulling the assembly towards the rear of the unit. Slide the sprocket, on the drive shaft out of the rear bushing. (Fig. 12)

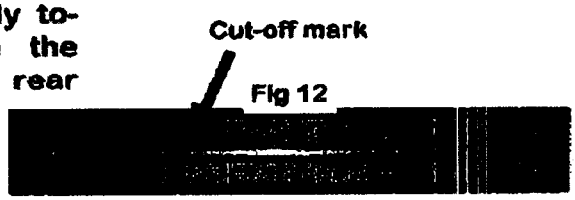


Fig 12

11. Cut on both lines. (Fig 12) Deburr and smooth off all cut ends to ease the remainder of the installation—Discard the short piece as noted in (Fig. 13)

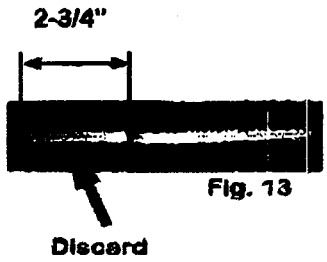


Fig. 13

12. Insert the end of the long tube without any holes, into the drive tube on the end of the main tube assembly. DO NOT INSTALL FASTENERS INTO THIS CONNECTION AT THIS TIME!. (Fig. 14)

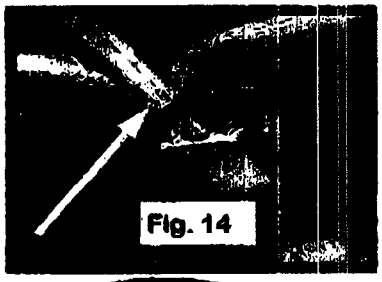


Fig. 14

13. Slide the brake assembly, shown in (Fig. 15) onto the drive shaft end, between the rear bumper and the rear cross-member. Next slide the shaft with the sprocket attached, thru the bushing on the plate attached to the rear bumper, Fig 16) and into the front of the brake assembly. Re-Install the chain between the upper and lower sprocket at this time.

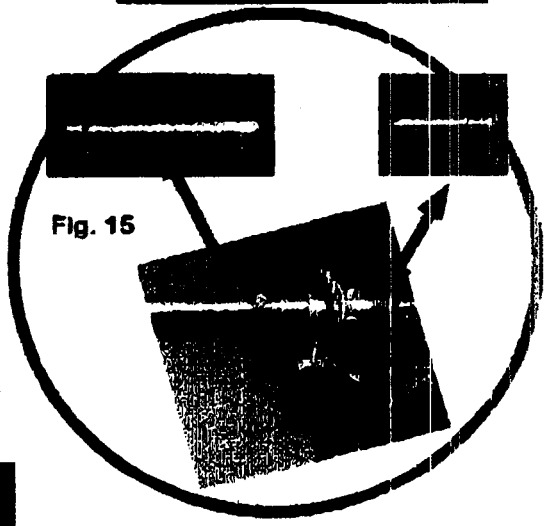


Fig. 15

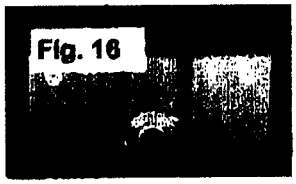


Fig. 16

14. Slide the brake assembly bracket forward until it is seated against the rear cross-member. (Fig. 17) Check the drive tube alignment between the sprocket and the end of the main tube assembly and when the tube is straight, clamp the brake assembly in place to mark the mounting holes for drilling. In addition check the chain adjustment. (Fig. 18)

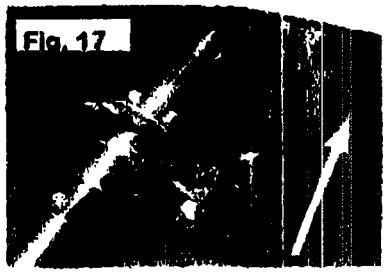


Fig. 17


Fig. 18

15. If necessary to adjust the chain, follow these directions. Check the distance between the chain links when the chain is pinched together. This dimension should be between 1/2" & 1". To adjust the chain to these dimensions, rotate the right side of the lower sprocket mounting plate, either up or down to change the spacing.(Fig. 18 When the chain has been adjusted to the proper spacing insert another 1/4" TEK screw into the bracket hole and into the rear bumper. This may drill another hole in the bumper. (Fig. 16a) Check the master chain link to insure that it is properly locked in place.

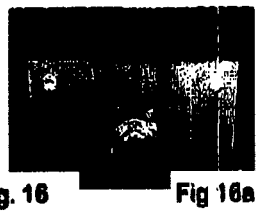


Fig. 16 Fig 16a

16. If the lower rear assembly has been moved, re-check the drive shaft alignment and re-align the drive shaft and brake assembly, if necessary. Clamp the brake assembly to the rear cross-member and install the two 1/4" x 1" tek screws into the top holes of the brake assembly bracket. (Fig 19) (Tek screws included in fastener package.)

Fig. 19

17. Next, place the template (Fig. 20) on the back side of the rear cross-member, place the centerline over the center of the drive shaft and slide the template up to the bottom of the floor. Center punch the center location of the 5/16" diameter holes and then using a drill , with a 5/16" drill bit and positioned level with the bottom of the floor, Drill completely thru the rear cross-member. These holes should align with the slots in the brake assembly mounting flanges. Insert the 1/4" carriage bolts thru the mounting flanges on the brake assembly and thru the rear cross-member, install the 1/4" nuts with star washer onto each carriage bolt and tighten against the back of the rear cross-member.

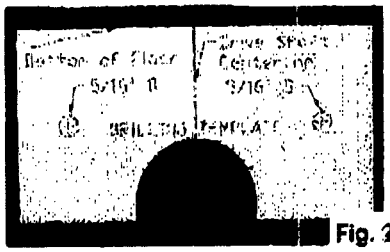


Fig. 20

18. When the upper and lower sprockets have been aligned, (Fig 21) check the back side of the lower sprocket to insure that the chain and or sprocket is not rubbing on the lower bracket. If necessary, move the lower sprocket toward the rear just enough to remove the contact. This area can also be sprayed with a spray lubricant. (Fig. 22)

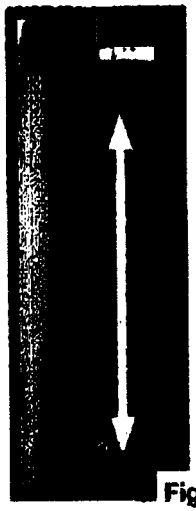


Fig. 21

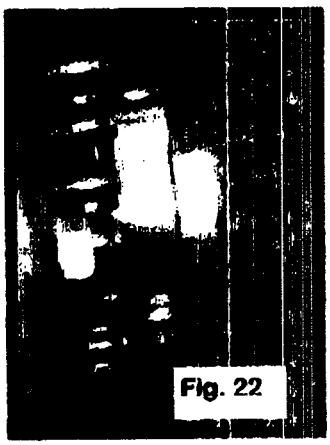


Fig. 22

19. Next—Remove 2 of the #10 Red headed screws from the parts package and insert them into the holes on the front brake shaft. (Fig. 23)

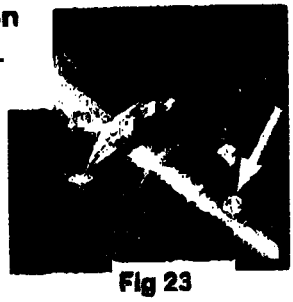


Fig 23

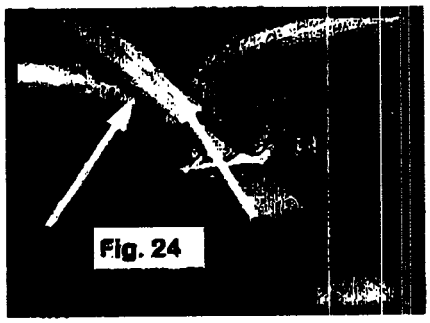


Fig. 24

20 Move the rear section of the drive shaft forward onto the rear of the brake assembly and with the remaining red headed screws in the fastener package, secure the drive shaft into the stub shaft on the end of the main tube assembly. Use the hole provided in the stub tube as a guide. (Fig. 24

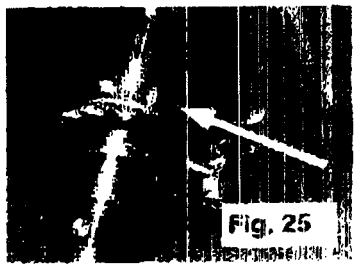


Fig. 25

21. One last Drive Shaft fastener to go. On the brake end of the long drive tube use the holes in the tube as a guide to drill 1/4" Diameter holes completely thru the tube and the shaft to install a 1/4"x1" hex bolt with a 1/4" nylok nut. (Fig.25)

22 Remove the camping trailer from supports and sit on the ground for testing.

23. TESTING PROCESS crank up the roof until the green cable, located at the doorside rear lift arm, is taut. (cable slack removed) WHILE CRANKING THE ROOF UP THERE SHOULD BE A CONSISTENT CLICKING SOUND COMING FROM THE BRAKE PAWL OPERATION. EACH CLICK IS THE PAWL RESETTING ITSELF TO THE NEXT LEVEL.

24 APPLY NEW BRAKE ASSEMBLY INSTALLED STICKER (Fig

Fig. 26

NOTE: WE HAVE INCLUDED A WHITE LABEL WITH RED LETTERS (NEW Direct Drive Lift System Installed) to be attached to the face of the front cross-member on the left or door-side of the unit. Wipe the surface with alcohol to remove any foreign residue present, prior to application. This will serve as a visual notice that the lift system has been replaced per the instructions contained in this document. Fig. 23

Fig. 27

NEW BRAKE Assembly Installed

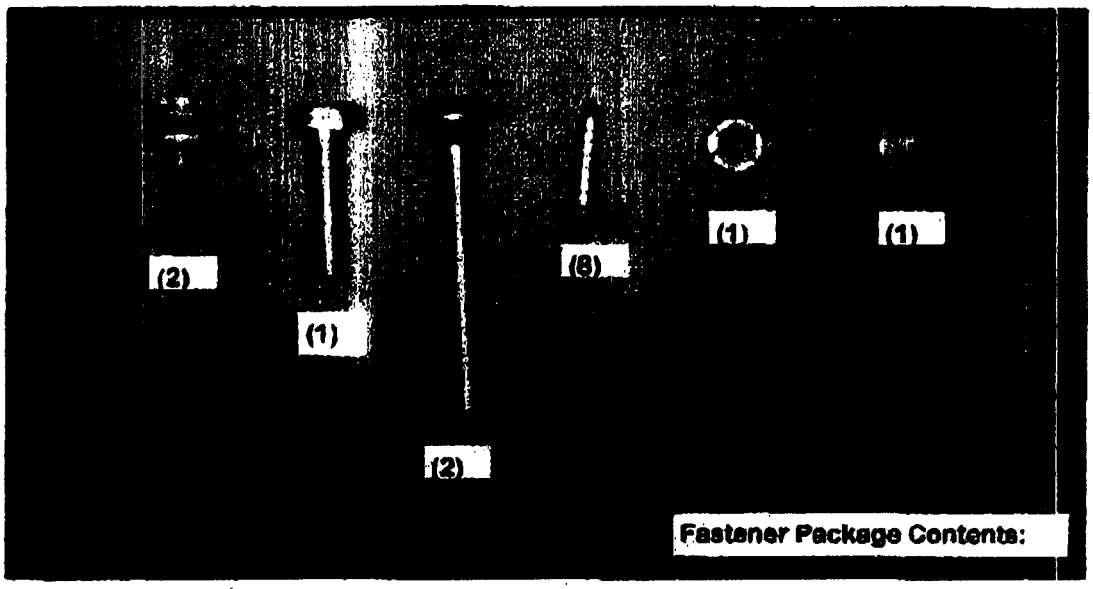
25. Install the brake assembly covers and both waist-hi molded covers. both waist-hi covers.

ADDITIONAL SUPPLIES—
ALL PURPOSE GREASE FOR SPRINGS

TOOLS REQUIRED— SCREW GUN—SQUARE SCREW BIT— 3/8" SQUARE DRIVE ADAPTER— 3/8" & 1/2" 3/8" DRIVE SOCKETS

SAFETY CHANNELS AS A ADDITIONAL SAFETY MEASURE—(2) SAFETY SUPPORT CHANNELS ARE PROVIDED. WHEN THE ROOF IS CRANKED ALL THE WAY UP , AS OUTLINED IN ITEM 21 ABOVE, INSTALL ONE ON THE DOORSIDE REAR LIFT ARM AND THE OTHER ON THE OFF-DOORSIDE FRONT LIFT ARM.. INSTALL THE CHANNELS BY SLIPPING THE TAPERED END OF THE CHANNEL UP UNDER THE BOTTOM OF THE ROOF EDGE AND OVER THE LIFT ARM AND THEN PUSH THE BOTTOM OF THE CHANNEL INWARD UNTIL IT IS COMPLETELY NESTED OVER THE BOTTOM OF THE LIFT ARM. ***NOTE: BE SURE TO REMOVE THE SAFETY CHANNELS PRIOR TO LOWERING THE ROOF ASSEMBLY.Fig. 22***

Fig. 28



NOTE: IF YOUR UNIT DOES NOT HAVE A 2-PIECE WAIST-HI ASSEMBLY CONTACT THE VIKING PARTS & SERVICE DEPARTMENT @ 1-800/239-6157 EXCEPTION: 17.5 LS, 8.5 LS, 2472 ST LS and 1272 ST LS DO NOT HAVE WAIST-HI ASSEMBLIES.