

INSTRUCTIONS FOR 4130 FAB9™ HOUSING HARDWARE

<u>ITEM</u>	<u>QTY</u>	<u>PART NO.</u>	<u>DESCRIPTION</u>
1	1	1242	Stud 3/8-24 x 2.10" Long
2	1	1301	Housing Filler Cap
3	11	3101-038-24C	Locknut 3/8-24 Nylon Insert Plated
4	20	3109-038-S-2-Y	Aircraft Washer 3/8" Small OD
5	9	3130-038F1.50B	Bolt 12-Point Head 3/8-24 x 1-1/2"
6	1	3116-1.109-14B	O-Ring for Filler Assembly
7	1	3566	Magnetic Drain Plug 1/2-20 x 3/4"
8	1	3567	Washer Gasket for 1/2" Drain Plug, Copper

INSTALLATION OF AXLE BEARING HOUSING ENDS

NOTE: If your FAB9 was purchased without the ends installed, follow this procedure for best results.

Install all suspension brackets first, and then install the backbrace. Some suspension brackets fit 360-degrees around the axle tube. **Do not** notch the brackets to clear the backbrace. Instead, notch the backbrace to clear the brackets. Next, install the backbrace on both sides of the housing. If the backbrace is too long, shorten the end closest to the housing end, then cap to enclose the backbrace. The last step is to weld the housing ends onto the axle tubes. This sequence prevents distorting the housing end alignment. An alignment fixture, such as Chassisworks' fixture #6708, is required to install the housing ends. After the housing ends are correctly aligned and welded, they may not sit perfectly centered on the axle tube and may appear crooked. This is normal because the axle tube will bend slightly from installation of the suspension brackets and backbrace. The housing alignment fixture holds the ends centered in relation to the third-member carrier bearings and may not be necessarily be centered on the axle tube. All axle bearings use a large wedding ring behind the wheel bearing. Make sure this ring clears the inside of the axle tube just inside the housing end. You may have to use a die grinder on the ID of the axle tube to gain some clearance.

TEST AND ASSEMBLY

1. Drill and tap an 1/8" pipe thread hole into the top of one of the axle tubes. Axle vent (8041) will be mounted after the housing has been successfully pressure tested.
2. **PRESSURE TESTING** - Both factory welded and customer welded housings must be pressure tested it to ensure no leaks are present. This is a simple procedure to perform at home. First, power wash the housing after all welding is done. Use duct tape to seal the housing ends and third-member hole. Hook an airline to the axle tube vent's threaded hole and pressurize the housing at 2 to 5 lbs., of air pressure. Don't worry if your duct tape seal leaks a little. All that matters is that you create a small amount of pressure within the housing. Use a squirt bottle with soapy water to spray all housing joints while checking for air bubbles. Weld any spots that blow bubbles. Make sure to turn off the air pressure before welding.
3. After pressure testing, the axle vent can be installed. The housing can now be painted or powder coated.
4. **FILLER CAP** - To install the filler cap, stretch the o-ring over the cap's threads and place it in the groove under the head of the cap. Apply some anti-seize to the threads and screw the cap on hand tight. This cap is large enough to allow you to inspect the ring gear when it is removed.
5. **HOUSING STUD** - From front side of housing face, screw the longest end of the double-ended stud (1242) into the faceplate mounting hole closest to the drain hole. The stud should extend outward from the housing face approximately 1-1/8". Secure the stud from inside the housing with a 3/8" washer and locknut.
6. Place one aircraft washer onto each of the 3/8 x 1-1/2" 12-point bolts, then screw into the housing face from the inside of the case. Use Loctite™ to secure them in place. They will act as studs to secure the third member housing. Use an aircraft washer and locknut to secure the third member housing.
7. The remaining ten washers and locknuts are used to secure the third-member to the housing.
8. Install the copper washer gasket over the magnetic drain plug. Put anti-seize on the drain plug threads and screw it into the bottom of the housing.
9. Do not use a gasket to seal the 9" dropout to the FAB9. Use RTV gasket sealant only.
10. To fill oil to correct level, remove fill level sight plug from dropout and fill FAB9 through large filler cap on back of housing until fluid level is even with bottom of dropout fill level plug.