

SUNTEC FUEL UNITS

OVERHAUL INFORMATION

MODELS J and H

TOOLS REQUIRED:

The tools required to service Suntec fuel units are shown in figure 1. A minimum of standard repair tools is required. **NOTE:** Use Williams 263-D 7/16" off set socket wrench on gage port plug, and Williams 266-D 5/8" off set socket wrench on intake and return port plugs. If these are not available, a standard set of 6 point socket head wrenches can be used. The 6" crescent wrench is used on piping connections wherever an open end wrench is necessary.

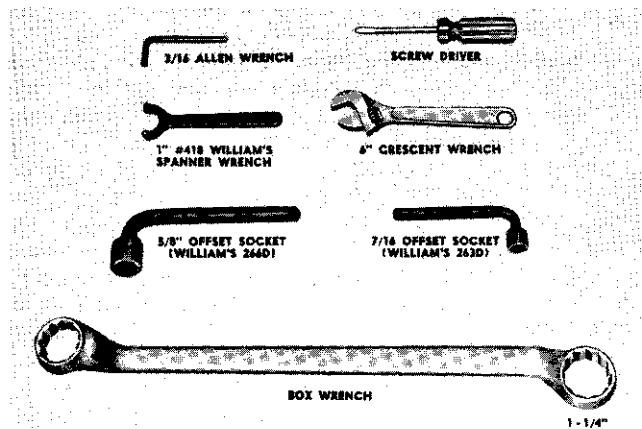


FIG. 1

SERVICING THE STRAINER:

Clean strainer at least once each heating season. **NOTE:** A very dirty strainer will cause an extremely high vacuum resulting in noisy operation.

Referring to figure 2 loosen the 8 screws holding the cover to the body with the 7/16" off set socket wrench. After the screws are loose they may be removed by hand. Take cover and cover gasket off and lift strainer out. As the strainer disassembles horizontally, all of the dirty oil in the strainer chamber will run out of the unit. This is desirable as otherwise this dirty oil would immediately fill the strainer after cleaning. Clean out any dirt remaining in bottom of strainer chamber. Clean the strainer with kerosene, trichloroethylene, or very hot water under pressure from the faucet.

When replacing the strainer make sure that the strainer gasket is positioned in the pump body and that the strainer is dry if cleaned with water. If there is evidence of rust inside of the unit be sure to remove water in supply tank.

CAUTION:

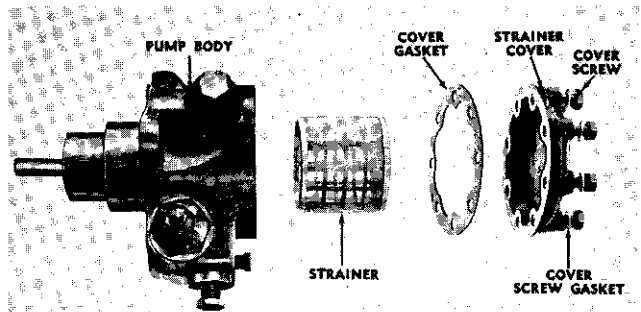


FIG. 2

SERVICING THE VALVE:

IMPORTANT: Before disassembling balanced valve put pressure gage in gage port of unit and read pressure with burner running. Fuel unit can then be set to same pressure when valve is reassembled.

Remove pressure adjusting cap with 5/8" off set socket wrench and relieve compression on the piston by turning the pressure adjusting screw counterclockwise until the screw extends out about 1/8". Then remove end plug assembly (Pressure Adjustment) with 1-1/4" box wrench. Next remove spring seat, spring and piston. This will permit examination of the piston cut-off seat. If this seat is damaged, a new piston assembly can be substituted as all parts in the valve are interchangeable.

Now remove nozzle end plug assembly with 1-1/4" box wrench. Next remove piston sleeve retainer.

Piston sleeve is also removable but it must always be removed from the gage port side of the unit in order to prevent injury to the "O" ring seal. Before reassembling, thoroughly clean all parts then coat the sleeve with a light grease or oil making sure that the "O" ring is thoroughly coated.

CAUTION:

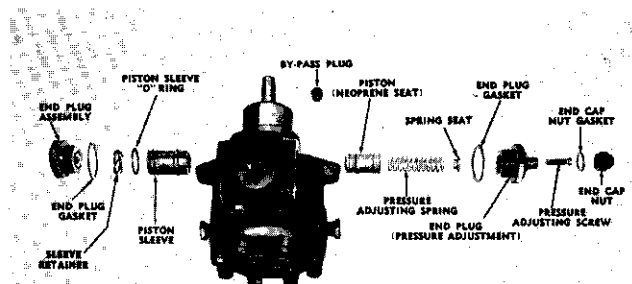


FIG. 3

To reassemble the valve reverse the above procedure as shown in figure 3. When reassembling the sleeve be sure that pressure adjusting screw assembly is assembled then tap the end of the sleeve *lightly* from the gage port side of the valve with a soft brass rod or wooden end of small hammer until it seats solid. Otherwise it is possible for the sleeve to be assembled in the wrong position thereby interfering with the performance of the valve in respect to operating pressure and cut-off. After reassembly start burner and reset pressure by turning pressure adjusting screw clockwise until pressure gage in gage port reads same as before disassembly.

The end plug, piston, and piston sleeve are interchangeable from one unit to another. A serviceman can, therefore, keep spare parts of these items in his kit for emergency use. **NOTE:** Pistons used in J and earlier H (Dash) -1-2 and -3, may be determined by the number of piston lands notched by the grooves. Pistons used in new H (Dash) -4, may be determined by the number of annular grooves.

IMPORTANT:

SERVICING THE SEAL:

Referring to figure 4 remove the seal cap with the spanner wrench. The spring forming a part of the seal will now force the seal cap out.

Remove seal assembly and shaft assembly. If seal assembly can not be manually removed, place pump shaft in a brass jawed vise and pull pump body from the shaft. Examine sealing faces on the seal assembly and bronze bushing. If either part is damaged they can be readily replaced from a Suntec approved service station or the factory.

To reassemble the seal first carefully wipe the bronze bushing face and seal assembly face with a soft cloth. Then insert shaft in body.

CAUTION:

Make certain that the keyway in the shaft is engaging the steel key in roller of the pump. When this is finished replace parts in sequence as shown in figure 4.

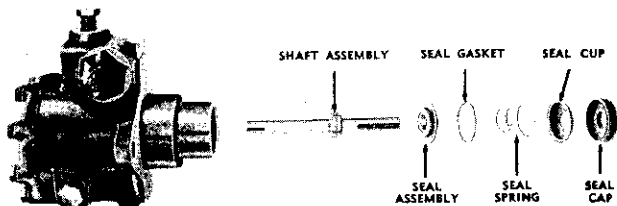


FIG. 4

SERVICING THE CARBON SEAL:

DISASSEMBLY PROCEDURE

Place the unit in a vise with the shaft extending in an upward vertical position. Then remove the truarc ring with a standard needle nose pliers or truarc pliers. Now

insert the pliers into the two small pin holes on the nitralloy part of the seal and remove this part with a turning and pulling motion. Next, remove the shaft from the pump. (Note: Notice that the carbon seal is still on the shaft. Do not use pliers to remove carbon member from shaft.) Remove carbon seal from shaft manually without use of tools.

REWORKING PARTS PROCEDURE

It is good practice to clean all seal parts with a fast drying solvent. Check the nitralloy and carbon faces for scratches. Also check the inner recess of the carbon part. The nitralloy part may be lapped if slightly scratched, but the carbon member must be replaced if damaged. Check the O.D. and I.D. of "O" rings for nicks or cracks. Replace "O" rings if damaged. Spring and spring retainer should move freely when assembled on shaft. Remove any burrs on O.D. of pump shaft, especially where set screw flat ends toward spring housing.

REASSEMBLY

Important: Keep all parts perfectly dry. Do not use grease or oil during this assembly. Note: When handling carbon part, be sure not to touch the seal face surface. This part should be handled by the edges.

Assemble seal ring on shaft, with beveled face outward from washer in spring housing. Slip the "O" ring on shaft and position in bevel in seal ring. Assemble carbon seal, with lapped surface facing outward, over "O" ring, and press into position. Be sure grooves on seal are in engagement with drive indentations in spring housing. Do not use any lubrication.

Install shaft in fuel unit so that keyway of shaft engages key in the gear set.

Now assemble large "O" ring to nitralloy stationary seal face. You may now use standard needle nose pliers to hold stationary seal face and assemble same to pump body and shaft by turning and pressing until this part clears the truarc ring groove. Now install truarc ring with standard needle nose pliers (Waldes Truarc plier No. 3-90°). Unit should then be watched and tested for presence of seal leaks. See Form No. 440044 for parts information.

