

# MIDCO SAND PUMPS

## Operating Instructions

### **Type G**

#### **Instructions for stringing up and operating the Type G or Plug Buster:**

Attach the wire line to the split bull plug in the conventional manner. Make sure that the set screws holding the plunger rod are sufficiently snug to prevent the rod from slipping. Pick the sand pump up by reeling in cable and hang it over the hole, supporting it with tool wrenches or hard wood clamps. Remove the set screws and reel the line in until it is supporting the weight of the sand pump. Clamps or wrenches can then be removed. Lower it into the well until it strikes the material to be removed. After the pickup for both the plunger and the load chamber is found, the full stroke of the plunger can be utilized to load the sand pump without danger of running off too much slack and thus possibly kinking the wire line.

In most instances, one or two strikes of the plunger are sufficient to load the sand pump. When the formation is tightly packed or large pieces are to be removed, pick up thirty to forty feet, then permit the line to reel off sufficiently fast to allow it to free fall for this distance. By this means a hard blow can be struck to the formation breaking up or changing the position of large pieces of debris and stirring up packed formations so they may be quickly loaded.

The pumping action should be continued only so long as necessary to completely load the chamber. Continued jamming of the sleeve into sand already trapped in the tube can often cause the plunger assembly to become "sanded up", necessitating laying the pump down and washing out the impeding material.

### **Type F-5**

#### **Instructions for stringing up and operating the Type F-5:**

Unscrew the sandline head and remove the plunger assembly from the tube. Thread the wire line through the head and sleeve, then babbitt the line into the "woodpecker" hole in the plunger. Insert the plunger assembly into the tube and screw in the sandline head. (No valve ball is necessary in the F-5 plunger and sleeve assembly, as an automatic valve is created by the contact and release of the sleeve and plunger on the upward and downward stroke.)

The operation to load the Type F-5 and the Type G is essentially the same. The distance between pick-up points of the plunger and the tube in the F-5 is determined by tube length. In the Type G, this is determined by the length of the plunger rod. If the formation is tightly packed, or large pieces are encountered, filling the sand pump can often be speeded up by repeatedly

dropping the sand pump to break up the formation. By flagging pick-up points of both the load chamber and the plunger assembly, and as the points change in respect to each other, the operator may determine when the chamber has been filled and the pump is to be withdrawn.

## **Type F**

### **Instructions for stringing up and operating the Type F:**

Unscrew the sandline head and remove the plunger assembly from the tube. Thread the wire line through the head and sleeve, then babbitt into the plunger. Attach the sleeve with the valve ball to the lower end of the plunger, then slide the plunger assembly into the tube and screw the sandline head into the top of the tube. The operation to load the Type F and the Type G is essentially the same. If the formation is tightly packed, or large pieces are encountered, filling the sand pump can often be speeded up by repeatedly dropping the sand pump to break up the formation. By flagging pick-up points of both the load chamber and the plunger assembly, and as the points change in respect to each other, the operator may determine when the chamber has been filled and the pump is to be withdrawn.

The pumping action should be continued only so long as necessary to completely load the chamber. Continued jamming of the sleeve into sand already trapped in the tube can often cause the plunger assembly to become "sanded up", necessitating laying the pump down and washing out the impeding material.

## **Type J**

### **Instructions for stringing up and operating the Type J:**

The operation of the Type J is similar to the method used for other types of Midco sand pumps.

## **PLUGBUSTER**

### **Instructions for operating the PLUGBUSTER:**

The Midco Plugbuster was designed to run on a sand line using a standard Guiberson-type wire line swivel. Unscrew the split bull plug and insert the swivel. Screw the split bull back into the tool head box. Make sure that the set screws are sufficiently snug to prevent the rod from slipping. Pick the Plugbuster up by reeling in the cable and hang it over the hole, supporting it with tool wrenches or hard wooden clamps. Remove the set screws and reel the line in until it is supporting the weight of the Plugbuster. Clamps or wrenches can then be removed. Lower the tool into the well until it strikes the material to be removed. After the pickup for both the plunger rod and the tube are found, a full

stroke of the plunger rod can be utilized to load the Plugbuster without danger of running off too much slack and thus possibly kinking the sand line.

In most instances, two or three strokes of the plunger are sufficient to load the tool. When the formation is tightly packed or an obstruction needs to be drilled, pick the tool up thirty to forty feet, then permit the line to reel off sufficiently fast to allow the tool to free fall for this distance. By this means a hard blow can be struck to the formation breaking up or changing positions of large pieces of debris and stirring up packed formations so they may be quickly loaded.

The pumping action should be continued only so long as necessary to completely load the chamber. Continued jamming of the sleeve into sand already trapped in the tube can often cause the plunger assembly to become "sanded up", necessitating laying the pump down and washing out the impeding sand.

## **Type K and KA**

### **Instructions for operating the Type K and KA:**

The Midco Type K and KA are both designed to run on a sand line using a standard Guiberson-type wire line swivel. Simply screw the swivel box onto the  $\frac{3}{4}$ " sucker rod pin on top of the pump. Make sure the set screws in the K-2 guide are sufficiently snug to prevent the rod from slipping. Pick the sand pump up by reeling in the cable and hang it over the hole, supporting it with tool wrenches or a hard wooden clamp. Remove the set screws and reel the line in until it is supporting the weight of the sand pump. Clamps or wrenches can then be removed. After the pickup for both the plunger rod and the tube are found, a full stroke of the plunger rod can be utilized to load the sand pump without danger of running off too much slack and thus possibly kinking the sand line.

In most instances, two or three strokes of the plunger are sufficient to load the tool. The pumping action should be continued only so long as necessary to completely load the chamber. Continued jamming of the sleeve into sand already trapped in the tube can often cause the plunger assembly to become "sanded up", necessitating laying the pump down and washing out the impeding sand.