

## **Application Manual**

## **Tubing**

Tubing and Swagelok fittings are used on both the frame lubrication system and the cylinder lubrication system. On larger frame classes, some of the frame lubrication system includes welded pipe.

Tubing is provided in 304 / 304L stainless steel, ASTM A213/A269/A511. A minimum size of 1/4 inch O.D. with 0.035 wall is applied. 0.065 inch wall tubing is used on higher pressure applications. Fittings are Swagelok zinc plated steel fittings.

An option to apply 316 / 316L stainless steel tubing and 316 / 316L Swagelok fittings is available. When selected, the 316L stainless steel tubing and fittings will be applied to all frame and cylinder lubrication tubing. Tubing is differentiated from welded piping for the stainless steel options.

On larger frames welded pipe is required for the frame oil pump suction pipe (JGC:D:F/4 and larger) or the oil filter to gallery pipe (KBZ:U/2 and larger). The oil filter to gallery pipe is downstream of the oil filter. The material for these piping sections is carbon steel with carbon steel fittings and flanges. A separate option is available for these frame classes to provide 316L welded oil piping.

Items provided in carbon steel despite selecting the stainless steel tubing or stainless steel piping options include the frame suction strainer and the oil gallery pipe. Both of these are internal to the crankcase and below the normal oil level.

Refer to the Ariel Pricebook for these options.