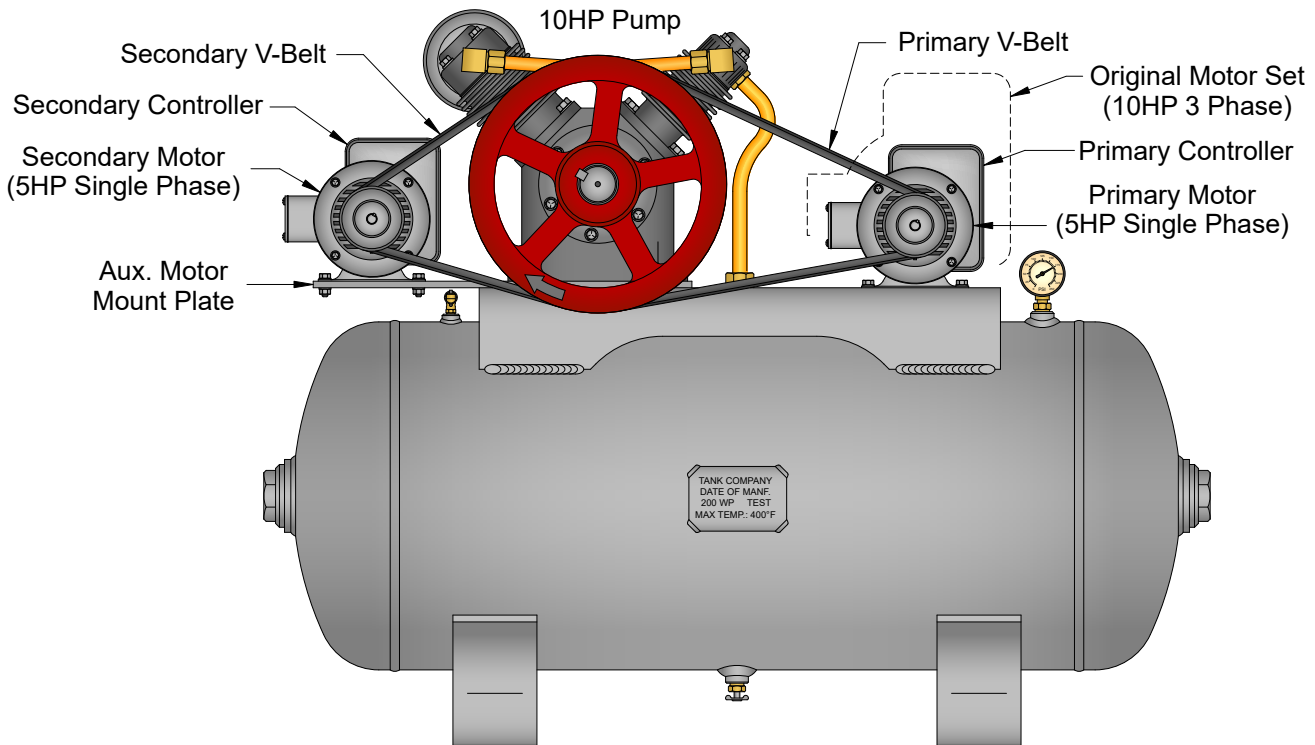


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## Dual Motor Air Compressor

by Brian S. Elliott



There are many instances where a three phase air compressor must be installed into a facility that has only single phase power. The obvious solution to the problem is to replace the motor and motor controller with single phase units. This is an acceptable solution for compressors 7.5 HP or smaller. However, larger single phase motors are not readily available and when they are, they are prohibitively expensive. In the event that the compressor is a 10 or 15 HP unit, then a dual motor configuration can be configured, as shown in the illustration above.

In this case, the original motor and controller are removed and discarded. An auxiliary motor mount plate is added to the opposite side of the pump. Two motors, with matching controllers, are mounted, one in the original position and one on the auxiliary mount. Each single phase motor has an HP rating that is half of the original motor. The two motors combined are equal to the same horsepower as the original. It should be noted that most compressors 10 HP or larger, are equipped with dual v-belt grooves on the flywheel. This is ideal for a dual motor conversion as it supports the two individual v-belts required for the final assembly. The pressure switch is rewired so that it activates both motor controllers simultaneously.

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