

MECHANICAL CHARACTERISTICS

When replacing motors, important mechanical features must be identified. The replacement motor should be about the same diameter and length as the replaced motor, so it can be installed in the existing mount. This section will discuss the problems encountered in motor mountings and some solutions to these problems.

FACT The most common motor diameters the service person will encounter are 3-1/3", 4-7/16", 5", and 5-5/8".

FACT Motor shaft dimensions must match in diameter and length. All Fasco distributor models that are not direct OEM replacements have long shafts so they can be cut to length. The OEM direct replacement models have shafts cut to the exact OEM length, so those shafts may be shorter than the models in the general line.

FACT When modifying a motor shaft, make certain the shaft is tightly held in a vise to avoid stress on the motor bearings.

FACT When cutting a shaft to length, it is extremely important to prevent steel filings and/or shavings from entering the motor.

FACT Make sure no metal burrs are left on the shaft after it is cut. If these are not removed, it may be difficult to fit the fan blade or wheel onto the shaft.

NOTE: Always wear safety glasses while modifying a shaft to protect your eyes from sharp metal filings.

FACT If the motor to be replaced has a different shaft diameter than the replacing motor, Fasco shaft bushings can sometimes be used.

The most commonly available sizes are:

1/4" ID x 5/6" OD

5/16" ID x 3/8" OD

3/8" ID x 1/2" OD 1/2" ID x 5/8" OD



FACT There are a few common ways contractors shorten motors through bolts when it is necessary to properly install a motor. Whether they snap them off with a hollow nut driver or cut them off with small bolt cutters, it is always good to first spin on an extra nut all the way down to the face of the motor. After the bolt is shortened, the nut should be unscrewed off the through bolt. Taking the nut off will reshape the starting thread which usually gets damaged when the bolt is cut or broken off. This makes it much easier to start the nuts when the motor is mounted.