

## PROPELLER SERVICE TOOLS Hub Pullers



### GENERAL DUTY APPLICATIONS

Part No. 05380401

- Precision machined.
- $\frac{5}{8}$ " steel bolt machined and tapered on one end.
- $1\frac{1}{4}$ " threading into body resists stripping.
- Standard  $\frac{7}{8}$ " wrench fitting.
- Four grab bolts for maximum holding power.
- Torque Limit: 75 ft. lbs.



### HEAVY DUTY APPLICATIONS

Part No. 05214101

- Zinc plated, heavy steel construction.
- Sight holes for visual alignment of puller and motor shaft.
- Four square head cup point grab bolts.
- $\frac{5}{8}$ " bolt will not bend with proper use.
- Bar top ... grip with wrench.
- $\frac{1}{4}$ " steel collar.
- 1" long threaded surface.
- Torque Limit: 75 ft. lbs.

Fan blades can be removed in two different ways. If the fan blade has a protruding hub, use the option shown below.



Place the narrow end of the plastic centering sleeve over the end of the motor shaft.



Place the head or face of the puller against the front of the fan blade hub, and insert the puller shaft into the wide end of the centering sleeve. **This is critical.** It will align the puller with the motor shaft. Otherwise, the puller will just pull against itself.



Get the four fingers. Take each finger and place one hooked end of the finger around the backside of the fan blade hub. Hook the other end of the finger into one of the four finger holes on the puller body. (Finger holes are the  $\frac{1}{2}$ " holes located  $\frac{1}{3}$  of the way up the puller body.) In effect, the fingers reach around and grab the back of the fan blade hub from the puller.



Now use a wrench to turn the puller shaft. (To prevent the puller from twisting, it is suggested you grasp the bar across the top of the puller with a second wrench.) The motor shaft will then be pushed through and away from the fan blade and the fan blade will be pulled off the shaft.

### Optional Method (this method is also used for Blower Wheels).



Place the narrow end of the plastic centering sleeve over the end of the blower motor shaft.



Place the head of the puller over the blower wheel hub, and insert the puller shaft into the wide end of the centering sleeve. **This is critical.** It will align the puller with the blower motor shaft. Otherwise, the puller will just pull against itself.



Firmly tighten the four grasping bolts so they grab onto the blower wheel hub.



Now, use a wrench to turn the puller shaft. (To prevent the puller from twisting, it is suggested you grasp the bar across the top of the puller with a 2nd wrench.) The motor shaft will then be pushed through and away from the blower and the blower will be pulled off the shaft.

**IMPORTANT:** Before attempting to use these pullers, make certain you have removed all setscrews and brackets that are holding the fan blade or blower wheel to the motor shaft. Although you can generate a tremendous force with this puller, you should always properly prepare the motor shaft by cleaning with a sand cloth and using WD-40, or some other penetrating oil. If there are any burrs or ridges on the puller shaft, these should be filed smooth. To facilitate the centering of the puller shaft on the motor shaft, a center punch may be used to place an indentation in the end of the motor shaft.

**ALWAYS** make certain that the shaft of the puller is properly seated against the motor shaft. If the puller shaft is seated against the fan or blower hub instead of the motor shaft, the puller will be pulling against itself. If the unit is not properly aligned, it simply will not work.

For Replacement Parts, see bottom of Page 20.

Specifications are subject to change without notice or obligation.

# UNIVERSAL REPLACEMENT PROPELLERS

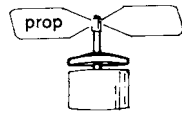


## PROPELLER SERVICE TOOLS

### Rainshields



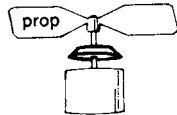
7"



Interior cooling blades force air over motor. Use 7" diameter for open type motors.



3-1/2"



Position Rainshield between propeller and motor. Use 3 1/2" diameter for closed motors.

An inexpensive way to reduce the potential of rain getting into the motor bearings on vertical shaft motor applications. Use primarily for vertical shaft motors on outdoor condensing units, but can also be used in any position to keep water from migrating along the shaft.

- Simple press fit on the 1/2" to 5/8" shafts.
- 7" with interior cooling blades effectively reduce motor winding temperature and protects open motors.
- 3 1/2" for closed motors to protect bearings.
- Used as original equipment on many new air conditioners.

Part Number	Single Size
60-3853-03	3 1/2" x 1/2"
60-3795-01	7" x 1/2"
60-3795-02	7" x 5/8"

### Pitch Gauge

Part No. 05099801



#### EVERY TOOLBOX NEEDS A LAU PITCH GAUGE

Eliminate the guesswork when replacing old propellers. Lau's Pitch Gauge measures the correct pitch and direction of rotation.

#### FOLLOW THESE 3 STEPS TO MEASURE PROPELLER ROTATION AND PITCH:



##### STEP 1

Position the faceplate of the gauge on the blade of the fan.

##### STEP 2

Place the foot of the wire body of the Pitch Gauge on the center section (spider) of the fan.

##### STEP 3

The pointer gives a direct reading of the pitch in degrees, and the clockwise / counter-clockwise markings indicate the rotation.

### Replacement Parts for Hub Pullers

(See Page 19)

Hub Puller	Replacement Fingers (set of 4)	Main Center Shaft	Centering Sleeve
053804-01 General Duty	052499-01	052497-01	052498-01
052141-01 Heavy Duty	052211-01	052212-01	052213-01

#### SHIPPING NOTE:

Most Lau products are suitable for normal parcel shipping services such as FedEx or UPS. However, some products are too large and must be shipped via common carrier.

**Next day or 2nd day parcel service:** most products are suitable for such expedited services at special handling costs. However, due to the bulkiness of the majority of products featured in this catalog, you can avoid unpleasant surprises by checking with our Customer Service to verify cost before you request expedited service.

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