

Shearpin Failure Trouble-Shooting Guide

SE30, SE40, SE60

To be used in conjunction with our
Shearpin Replacement Instruction Guide.



Please read over the owners manuals and familiarize yourself with the product. There is a trouble-shooting section in each manual. This guide is meant to be a supplement to these providing illustrated instructions for more detailed trouble-shooting.

The motor shaft shearpin is designed to break in most instances of sudden impact of the props against debris that might get sucked into the tunnel during normal thruster use. This is to help minimize potential damage to the gearleg and motor.

It should be noted that not all tunnel obstructions will cause the shearpin to break. Some tunnel obstructions will not shock-load the shearpin and will slow the thruster more gradually.

Any time the thruster stops thrusting, or performance is suddenly reduced, the operator should immediately stop attempting to run the thruster until the cause is known and corrected.

Normal Breakage:

In the event of a break due to a tunnel obstruction the shearpin will break into three clean pieces.



Motor Bracket Miss-Alignment:

The Motor Bracket must sit flush on the thruster tunnel. Please refer to the owner's manual for details.

If there is fiberglass or paint build up on the tunnel under the motor mounting bracket then a miss alignment of the gearleg shaft and motor shaft will occur. This will cause the shearpin to move up and down in the gearleg shaft u-slot as it rotates wearing it down in four spots.

The shearpin here shows premature wear due to bracket miss-alignment. There are identical wear spots not seen in photo on the opposite side of the shearpin.



Shown here is a shearpin worn from bracket miss-alignment after breakage. Metal fillings will be seen on the top of the gearleg in the event of this type of failure.



All tunnel build up must be removed in order to eliminate reoccurrence of this failure. Please contact your Side-Power distributor for further detail.

Incorrect gearleg engagement height:

The gearleg shaft height must be within specification in order for the gearleg to engage properly. A gauge is supplied with the thruster to measure correct gearleg shaft height.

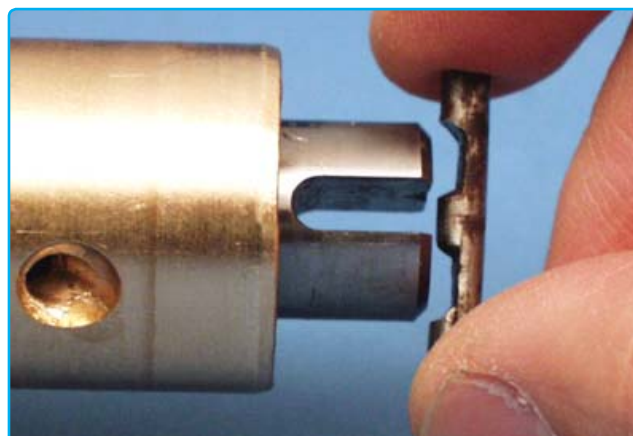


Additional gauges can be obtained through your Side-Power distributor.

If the gearleg height is too high then the shearpin will be bent when the motor is tightened down on the motor bracket.



If the gearleg shaft is too low then the shearpin will not fully engage, the shearpin will be partially worn through as shown here.



Contact your Side-Power distributor for details for further detail to achieve proper gearleg shaft height.

Shearpin slipping out of motor shaft:

If the shearpin pulls out of the motor shaft it will get bent into a u-shape as it hits the gearleg mounting bolts as it rotates.



The SE30 and SE40 model shearpins are held in place with a circlip. Replacement circlips can be obtained at your Side- Power distributor.



The SE60 model shearpin is held in place by means of a friction fit. It is possible that after repeated shearpin breakages that the shearpin holes in the motor shaft get enlarged such that the shearpin is no longer being held firmly in place. In this situation the shearpin can be simply held in place by wrapping tape around the motor shaft/shearpin after installation.

