



*GUY R. FOGEL M.D. FAAOS*  
*SPINEPAINBEGONE*

January 30, 2016

Re: The Tornado technique of pedicle screw removal

To Whom It May Concern:

The Tornado surgical technique is centered on an instrument that allows fast and sure extraction of a tuliped pedicle screw.

Some background information about pedicle screw removal is indicated. Removal of pedicle screws has always been an exhaustive exercise that is necessary when the patient demands the screws be removed or the surgeon needs the pedicles for revision with his own pedicle screws. Pedicle screw removal is something a surgeon cannot get away from. There are hundreds of different pedicle screw types to the point there is a Universal screw removal tray at every case with all sizes of all types of screwdriver blades, hex, torx etc. When the right size is found often the pedicle screw may be incarcerated in the bone and will not turn. Not infrequently even with the variety of screw drivers available a proper sized driver blade will not be found and the screw will not be removable. Also one may strip the inner screw or be unable to rotate the tulip to gain full access to the inner screw. All of this is very time consuming to the point I would add one hour to the time scheduled if screw removal is required. On final attempt at removal would be to cut a short piece of rod and secure it in the tulip and turn the new construct with a vice grip that always seemed too large to fit in the wound. As the construct would spin the protruding rod would tear up the surrounding muscle tissue extensively adding to the soft tissue damage of the surgical technique. All of this causes some fear of failure.

The Tornado technique has revolutionized screw removal. One removes the top screw end cap locking the rod to the pedicle screw and remove the rod itself. Then there is no matching of the pedicle screw to a screw driver or unfreezing the tulip from surrounding bone. All you need is access to the saddle of the tulip for the Tornado technique. Insert the Tornado into the saddle and secure it with the pedicle screw top end cap and turn out the pedicle screw with the large T-handled driver. In seconds it is on to the next screw to remove.

This practice has used the Tornado technique on every tuliped pedicle screw removal for five years. It has never failed to remove a screw efficiently and quickly. The Tornado technique has simplified pedicle screw removal and removed the problems when a screw is incarcerated and not removable with normal means. The Tornado technique is so effective It is used routinely rather than trying to find the right screw driver blade to remove the pedicle screw. The Tornado should be available with every pedicle screw removal tray. It actually could decrease the size and number of blades required in such sets if the Tornado technique was used to remove the screw once the end cap and rod were removed. I highly recommend the Tornado technique for pedicle screw removal.

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Please feel free to contact my office, at 210-615-8600, if I may be of further assistance.

Sincerely,

*Guy R. Fogel M.D.*

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