3.0 **510 (k) Summary**

**Sponsor:** Pioneer Surgical Technology  
375 River Park Circle  
Marquette, MI 49855  
(906) 225-5602  
Contact: Emily M. Downs  
Date prepared: August 10, 2010

**Device Name:** Streamline TL Spinal System

**Classification Name:** §888.3060, Spondylolisthesis Spinal Fixation Device System and Pedicle Screw Spinal System – §888.3070, Class III.

**Product Codes:**  
Predicate Device:  
K080518 – Quantum Spinal System (SE date – March 20, 2008)  
K080504 – LowTop Spinal Rod System (SE date – March 20, 2008)  
K003061 - SYNTHES USS (10.0mm Side Opening Screws)  

**Description:** The Streamline TL Spinal System consists of a variety of rods, polyaxial screws, transverse connectors, set screws and other connecting components used to build a spinal construct. Instrumentation is also available to facilitate implantation of the device components.

The Streamline TL Spinal System is intended to help provide immobilization and stabilization of spinal segments as an adjunct to fusion of the thoracic, lumbar, and/or sacral/iliac spine. Sacral/iliac screws are designed for posterior fixation.

The implant components can be rigidly locked into a variety of configurations, with each construct being tailor-made for the individual case.

Screws, Set Screws, and Connecting components are comprised of Titanium Alloy per ASTM F 136. Rods are comprised of Titanium Alloy per ASTM F 136 or Cobalt Chromium Molybdenum Alloy per ASTM F 1537.

**Intended Use:** The Streamline TL Spinal System components are non-cervical spinal fixation devices intended as an adjunct to fusion for use as a pedicle screw (T1–S2) sacral/iliac screw fixation or as an anterolateral fixation system (T8–L5). Pedicle screw fixation is limited to skeletally mature patients. These devices are indicated for all of the following indications: degenerative disc disease (defined as discogenic back pain with degeneration of the disc confirmed by history and radiographic studies), spondylolisthesis, trauma, (i.e., fracture or dislocation), deformities or curvatures (i.e., scoliosis,
kyphosis, and/or lordosis, Scheuermann’s Disease), tumor, stenosis, pseudoarthrosis, and failed previous fusion.

Technological Characteristics

The Streamline TL Spinal System consists of a range of polyaxial screw lengths and diameters that match that of predicate systems. The rods and connecting components are identical to that of the predicate system. Intended Use and Materials are also similar to that of the predicate systems.

Both the Streamline TL and the predicate system use a component (set screw/ cap) that connects to the screw yoke to lock down the rod/ screw head. The mechanism by which this component locks to the screw head is different between the Streamline TL system (threaded) and that of the Pioneer predicate system (cam lock).

Performance Data:

Mechanical testing was presented to characterize construct and component performance, including testing static and fatigue compression bending and static torsion per recognized ASTM F1717 as outlined in FDA’s “Guidance for Industry and Staff: Spinal Systems 510(k)s” issued May 3, 2004.

Additional testing was performed per internal protocols to characterize component performance and included evaluation of crosslink disassociation, saddle/ cap separation, and yoke disassociation from screw head.

The test results of verification testing demonstrate that the mechanical performance of the Pioneer Streamline TL Spinal System is substantially equivalent to the predicate devices.

Performance and SE Determination:

Comparisons of device performance data, materials, indications and design/function to predicate devices were provided in making a determination of substantial equivalence.
Dear Ms. Downs:

We have reviewed your Section 510(k) premarket notification of intent to market the device referenced above and have determined the device is substantially equivalent (for the indications for use stated in the enclosure) to legally marketed predicate devices marketed in interstate commerce prior to May 28, 1976, the enactment date of the Medical Device Amendments, or to devices that have been reclassified in accordance with the provisions of the Federal Food, Drug, and Cosmetic Act (Act) that do not require approval of a premarket approval application (PMA). You may, therefore, market the device, subject to the general controls provisions of the Act. The general controls provisions of the Act include requirements for annual registration, listing of devices, good manufacturing practice, labeling, and prohibitions against misbranding and adulteration. Please note: CDRH does not evaluate information related to contract liability warranties. We remind you; however, that device labeling must be truthful and not misleading.

If your device is classified (see above) into either class II (Special Controls) or class III (PMA), it may be subject to additional controls. Existing major regulations affecting your device can be found in the Code of Federal Regulations, Title 21, Parts 800 to 898. In addition, FDA may publish further announcements concerning your device in the Federal Register.

Please be advised that FDA’s issuance of a substantial equivalence determination does not mean that FDA has made a determination that your device complies with other requirements of the Act.
or any Federal statutes and regulations administered by other Federal agencies. You must comply with all the Act’s requirements, including, but not limited to: registration and listing (21 CFR Part 807); labeling (21 CFR Part 801); medical device reporting (reporting of medical device-related adverse events) (21 CFR 803); good manufacturing practice requirements as set forth in the quality systems (QS) regulation (21 CFR Part 820); and if applicable, the electronic product radiation control provisions (Sections 531-542 of the Act); 21 CFR 1000-1050.

If you desire specific advice for your device on our labeling regulation (21 CFR Part 801), please go to http://www.fda.gov/AboutFDA/centersoffices/CDRH/CDRHOFFICES/UEM115809.htm for the Center for Devices and Radiological Health’s (CDRH’s) Office of Compliance. Also, please note the regulation entitled, “Misbranding by reference to premarket notification” (21CFR Part 807.97). For questions regarding the reporting of adverse events under the MDR regulation (21 CFR Part 803), please go to http://www.fda.gov/MedicalDevices/Safety/ReportaProblem/default.htm for the CDRH’s Office of Surveillance and Biometrics/Division of Postmarket Surveillance.

You may obtain other general information on your responsibilities under the Act from the Division of Small Manufacturers, International and Consumer Assistance at its toll-free number (800) 638-2041 or (301) 796-7100 or at its Internet address http://www.fda.gov/MedicalDevices/ProductsandMedicalProcedures/default.htm.

Sincerely yours,

Mark N. Melkerson
Director
Division of Surgical, Orthopedic
And Restorative Devices
Office of Device Evaluation
Center for Devices and
Radiological Health

Enclosure
Indications for Use Statement

510(k) Number (if known): K093692

Device Name: Streamline TL Spinal System

Indications for Use: The Streamline TL Spinal System components are non-cervical spinal fixation devices intended as an adjunct to fusion for use as a pedicle screw (T1-S2), sacral/iliac screw fixation or as an anterolateral fixation system (T8 – L5). Pedicle screw fixation is limited to skeletally mature patients. These devices are indicated for all of the following indications: degenerative disc disease (defined as discogenic back pain with degeneration of the disc confirmed by history and radiographic studies), spondylolisthesis, trauma, (i.e., fracture or dislocation), deformities or curvatures (i.e., scoliosis, kyphosis, and/or lordosis, Scheuermann’s Disease), tumor, stenosis, pseudoarthrosis, and failed previous fusion.

Prescription Use OR Over-the-Counter Use
(Per 21 CFR 801.109)

(PLEASE DO NOT WRITE BELOW THIS LINE - CONTINUE ON ANOTHER PAGE IF NEEDED)

Concurrence of CDRH, Office of Device Evaluation (ODE)

(Division Sign-Off)
Division of Surgical, Orthopedic, and Restorative Devices

510(k) Number K093692