

**510(k) Summary****JUL - 2 2010**

**Contact:** Ms. Michelle McDonough  
Musculoskeletal Clinical & Regulatory Advisers, LLC  
1331 H Street NW, 12<sup>th</sup> Floor  
Washington, DC 20005  
Tel: 202.552.5800  
Fax: 202.552.5798

**Device Trade Name:** DSS™ Stabilization System -- Rigid

**Manufacturer:** Paradigm Spine, LLC  
505 Park Ave. 14<sup>th</sup> Floor  
New York, NY 10022

**Classification:** 21 CFR §888.3070, Pedicle screw spinal system

**Class:** III

**Product Code:** NKB, MNH, MNI

**Date Prepared:** April 15, 2010

**Indications For Use:**DSS™ Stabilization System - Rigid

The DSS™ Stabilization System – Rigid is intended as a single-level system for noncervical pedicle fixation from the T4 to S1 vertebrae in skeletally mature patients to help provide immobilization and stabilization of spinal segments as an adjunct to fusion for the following indications: degenerative disc disease (defined as back pain of discogenic origin with degeneration of the disc confirmed by history and radiographic studies); spondylolisthesis; trauma (i.e., fracture or dislocation); spinal stenosis; curvatures (i.e., scoliosis, kyphosis, and/or lordosis); tumor; pseudarthrosis; and failed previous fusion. The DSS™ Stabilization System – Rigid is intended to be used with autograft and/or allograft.

DSS™ Stabilization System - Slotted

The DSS™ Stabilization System - Slotted is intended to provide immobilization and stabilization of spinal segments as an adjunct to fusion in the treatment of the following acute and chronic instabilities or deformities of the thoracic, lumbar, and sacral spine: degenerative spondylolisthesis with objective evidence of neurologic impairment, kyphosis, and failed previous fusion (pseudarthrosis).

In addition, the DSS™ Stabilization System - Slotted is indicated for use in patients:

- Who are receiving fusions with autogenous graft only;

- Who are having the device fixed or attached to the lumbar or sacral spine;
- Who are having the device removed after the development of a solid fusion mass.

Note: The Rigid Coupler and Slotted Coupler are not intended to be used together.

**Device Description:**

The DSS™ Stabilization System --Rigid is comprised of a variety of pedicle screws sizes, and couplers that act as longitudinal spacers that are uniquely fitted for each individual case. The pedicle screws and couplers are manufactured from medical grade titanium alloy (Ti6Al4V). This submission presents the addition of a 20mm long rigid coupler.

**Predicate Device(s):**

DSS™ Stabilization System -- Rigid was shown to be substantially equivalent to previously cleared devices (K080241, K090408, K090099, and K091944) and has the same indications for use, design, function, and materials used.

**Non-clinical Testing:**

Static and dynamic mechanical testing was performed in conjunction with ASTM F1717 (Standard Test Methods for Spinal Implant Constructs in a Vertebrectomy Model). Testing included static flexion, static extension, and static axial rotation testing and dynamic compression bending testing.

**Conclusion:**

Performance testing indicates the DSS™ Stabilization System -- Rigid has equivalent performance to predicate devices.



Food and Drug Administration  
10903 New Hampshire Avenue  
Document Control Room - WO66-G609  
Silver Spring, MD 20993-0002

JUL - 2 2010

Paradigm Spine, LLC  
% Musculoskeletal Clinical Regulatory Advisers, LLC  
Ms. Michelle McDonough  
1331 H Street NW, 12<sup>th</sup> Floor  
Washington, District of Columbia 20005

Re: K101083  
Trade/Device Name: DSS™ Stabilization System -- Rigid  
Regulation Number: 21 CFR 888.3070  
Regulation Name: Pedicle Screw Spinal System  
Regulatory Class: Class III  
Product Code: NKB, MNH, MNI  
Dated: June 29, 2010  
Received: April 19, 2010

Dear Ms. McDonough:

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). You may, therefore, market the device, subject to the general controls provisions of the Act and the limitations described below. 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.

The Office of Device Evaluation has determined that there is a reasonable likelihood that this device will be used for an intended use not identified in the proposed labeling and that such use could cause harm. Therefore, in accordance with Section 513(i)(1)(E) of the Act, the following limitation must appear in the Warnings section of the device's labeling:

*"The safety and effectiveness of this device has not been established for the intended use of spinal stabilization without fusion. This device is only intended to be used when fusion with bone graft is being performed at all instrumented levels."*

Please note that the above labeling limitations are required by Section 513(i)(1)(E) of the Act. Therefore, a new 510(k) is required before these limitations are modified in any way or removed from the device's labeling.

The FDA finding of substantial equivalence of your device to a legally marketed predicate device results in a classification for your device and permits your device to proceed to the market. This letter will allow you to begin marketing your device as described in your Section 510(k) premarket notification if the limitation statement described above is added to your labeling.

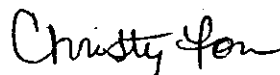
If your device is classified (see above) into either class II (Special Controls) or class III (PMA), it may be subject to additional controls. Existing major regulations affecting your device can be found in the Code of Federal Regulations, Title 21, Parts 800 to 898. In addition, FDA may publish further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

Sincerely yours,



Christy Foreman  
Acting Director  
Office of Device Evaluation  
Center for Devices and  
Radiological Health

Enclosure

#### 4. Indications for Use

510(k) Number (if known): K101083

Device Name: DSS™ Stabilization System

##### DSS™ Stabilization System - Rigid

The DSS™ Stabilization System – Rigid is intended as a single-level system for noncervical pedicle fixation from the T4 to S1 vertebrae in skeletally mature patients to help provide immobilization and stabilization of spinal segments as an adjunct to fusion for the following indications: degenerative disc disease (defined as back pain of discogenic origin with degeneration of the disc confirmed by history and radiographic studies); spondylolisthesis; trauma (i.e., fracture or dislocation); spinal stenosis; curvatures (i.e., scoliosis, kyphosis, and/or lordosis); tumor; pseudarthrosis; and failed previous fusion. The DSS™ Stabilization System – Rigid is intended to be used with autograft and/or allograft.

##### DSS™ Stabilization System - Slotted

The DSS™ Stabilization System – Slotted is intended to provide immobilization and stabilization of spinal segments as an adjunct to fusion in the treatment of the following acute and chronic instabilities or deformities of the thoracic, lumbar, and sacral spine: degenerative spondylolisthesis with objective evidence of neurologic impairment, kyphosis, and failed previous fusion (pseudarthrosis).

In addition, the DSS™ Stabilization System - Slotted is indicated for use in patients:

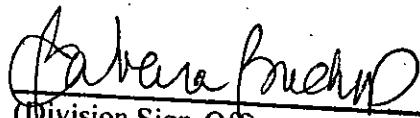
- Who are receiving fusions with autogenous graft only;
- Who are having the device fixed or attached to the lumbar or sacral spine;
- Who are having the device removed after the development of a solid fusion mass.

Note: The Rigid Coupler and Slotted Coupler are not intended to be used together.

Prescription Use ✓ AND/OR Over-The-Counter Use \_\_\_\_\_  
(Part 21 CFR 801 Subpart D) (21 CFR 801 Subpart C)

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

Concurrence of CDRH, Office of Device Evaluation (ODE)

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

Page 24 of 44

510(k) Number K101083