

Position Classification Standard for Orthotist and Prosthetist Series, GS-0667

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SERIES DEFINITION

This series includes positions which involve designing, fabricating, or fitting orthotic or prosthetic devices to preserve or restore function to patients with disabling conditions of the limbs and spine or with partial or total absence of limbs. The work requires (1) knowledge of anatomy, physiology, body mechanics, the application and function of orthoses (braces and orthopedic shoes) and prostheses (artificial limbs), and of the materials available for the fabrication of such devices; (2) skill in the use of tools and specialized equipment; and (3) the ability to deal effectively with patients and their problems, and to work with other members of the medical team.

This standard supersedes the standard for the Orthotist and Prosthetist Series, GS-0667, published in April 1959 and amended in June 1964.

EXCLUSIONS

Excluded from this series are positions that involve primarily:

1. Design, fabrication or repair of appliances primarily used for cosmetic and facial or body restorations, for example, artificial eyes, ears, nose and cosmetic hands or gloves. Such positions are classified in the [Restoration Technician Series, GS-0664](#).
2. Making plaster-of-paris impressions or casts for parts of the body for which orthotic or prosthetic devices are required. Such positions are classified in the [Health Aid and Technician Series, GS-0640](#).
3. Skill and experience in trades, crafts, or manual occupations. Such positions are exempt from the General Schedule (5 U.S.C. 5103). Although all positions in this series require skill and experience in trade and craft principles or processes, the trade skill or experience is not a paramount requirement. Positions which involve preponderantly the use of tools and craft processes are properly classified in this series when the purpose of the work is to train to become an orthotist or prosthetist.
4. Application of professional knowledge of physics or engineering. Some positions specializing in research or developmental work in orthotics or prosthetics may be staffed by an orthotist or prosthetist, a physicist or an engineer. Any question as to the occupation of such a position usually can be resolved by considering (a) the qualifications required, (b) the professional training and experience of the incumbent, (c) his approach to the work (e.g., from the point of view of an engineer or of an orthotist or prosthetist), and (d) the purpose of the assignment.

BACKGROUND INFORMATION

Orthotists and prosthetists work directly with physicians and representatives of allied health fields in the rehabilitation of the disabled, by providing suitable orthotic and prosthetic devices (braces, special shoes, and artificial limbs). Orthotists and prosthetists perform as members of clinic teams or as individual workers. They treat each patient as unique, and consider the "whole man." The patients not only vary by height, weight, age, sex, and in the exact nature of their physical deformities, but also in their personality traits, vocation, and lifestyle. Their psychological problems must be considered along with their anatomical and physiological needs.

The work includes:

- fitting patients with braces. Braces are worn for a long or short period of time, and serve as rigid immobilizing devices, or as light flexible supporting or correcting devices designed to permit a fixed range of movement and function.
- fitting patients having deformed or malfunctioning feet with orthopedic shoes. These shoes are modified to incorporate features designed to replace missing portions of feet, relieve pressure, shift weight, or permit desired movement of the ankle. The shoes enhance the balance, mobility, and appearance of the patients.
- fitting patients with prostheses (artificial limbs). These prostheses are designed to restore the maximum possible function with minimum energy consumption, and to provide optimum appearance, and static and dynamic alignment. The parts of the prostheses must have a proper relationship and fit one to another and to the patients' body in order to insure equilibrium in gait and stance required for function and comfort.

In this work orthotists and prosthetists:

- consult with physicians and assist in examining, evaluating, and formulating prescriptions for patients' orthotic or prosthetic needs;
- measure patients; design, fabricate, fit, and align static and dynamic devices;
- evaluate devices for function, cosmesis, and workmanship;
- instruct patients in their use; and
- analyze orthotic and prosthetic problems to develop or adapt new or improved methods, techniques, instruments and devices in the field of orthotics and prosthetics.

Orthotists and prosthetists use technological and craft knowledges and skills together with applied knowledge of human anatomy, physiology, body mechanics, and clinical practices and problems related to orthotic and prosthetic devices. Practitioners in this field must know:

- the properties of materials and the part these properties play in the functioning of a particular device;
- the function and range of motion of various anatomical and mechanical components;

- the location of important anatomical landmarks, pressure points, and the action and reaction of the muscles; and
- the relationship of design to the application and function of the devices.

In addition to their technical and scientific background, orthotists and prosthetists must acquire or possess the ability:

- to deal with their patient's physical problems, while recognizing their emotional and mental attitudes;
- to accept responsibility as participating members of the health care team, aware of the ethical considerations present and the need to adhere to medical ethical practices in all their relationships; and
- to work with others in attaining the objectives of the treatment plan prescribed by a physician or developed by a clinical team.

TITLE

Orthotic-Prosthetic Aid is the title for trainee positions at grades GS-3 and 4.

Orthotist is the title for nonsupervisory positions at GS-5 and above in this series specializing primarily in providing care to patients with disabling conditions of the limbs and spine by fitting them with orthotic devices (orthopedic shoes or braces).

Prosthetist is the title for nonsupervisory positions at GS-5 and above in this series specializing primarily in providing care to patients with partial or total absence of a limb by fitting them with prosthetic devices (artificial limbs).

Orthotist-Prosthetist is the title for nonsupervisory positions at GS-5 and above in this series which involve work of comparable level in both orthotics and prosthetics.

Positions requiring supervisory qualifications have "*Supervisory*" prefixed to the title.

CLASSIFICATION CRITERIA

Nature of assignment

Consider: The scope and difficulty of assignments, the types of problems assigned, and the knowledge, skill, and ability required to perform them.

Positions at beginning levels involve assignments to develop skills and knowledges required to fabricate and repair orthotic and prosthetic appliances. The intermediate levels provide for growth in skill and knowledge required to measure and fit patients with devices meeting their needs, and in the fundamental knowledge of the anatomical,

physiological, and psychological principles involved in meeting problems of patients. In higher level assignments incumbents are members of the clinical team evaluating cases and developing prescriptions, or participating in the development and evaluation of new techniques and devices.

Level of responsibility

Consider: The kind and degree of supervision received; the intensity of review of the work and the guidance furnished during the course of assignments; the degree of authority to make decisions and apply technical judgment in the accomplishment of assignments; the freedom to take action and the effect of decisions and actions on patient care, and on orthotic-prosthetic programs. Responsibility also includes consideration of personal contacts and the purpose of these contacts.

At trainee and lower grade operating levels the supervisor provides advice, assistance, and a detailed review of the work and work products. Personal contacts are with fellow workers and require tact, but relate to factual noncontroversial matters. Any unusual problems that arise are referred to supervisors. At the higher grade levels incumbents have increasing independence in carrying out their assignments as members of the medical team. Contacts at these levels involve patients and their families, physicians, surgeons, and others on the medical team for a variety of purposes, such as, measuring and fitting patients, giving advice on the use of devices, etc., or conducting lectures, seminars, and other educational activities. The conduct of contacts is an increasingly significant factor in successfully carrying out assignments at the higher grade levels, and demands considerable skill in inter-personal relationships.

NOTES TO USERS

This is a two-grade interval series from grades GS-5 through GS-11. This provision does not preclude the use of even grades GS-6, 8, and 10.

The standard contains specific grade-level criteria for nonsupervisory positions from grades GS-3 through GS-9. These criteria depict a progression in the development of skills, knowledges, and abilities, and are intended to cover the great majority of positions in this occupation. Not all positions in this occupation will fall within the grade levels covered, nor will all positions in the occupation resemble the assignments depicted in the standard. Positions in this occupation below GS-3 and above GS-9 should be evaluated by extension of the criteria in this standard with the application of sound position classification judgment.

GRADE LEVELS

ORTHOTIC-PROSTHETIC AID, GS-0667-03

Nature of assignment

Aids at GS-3 perform a variety of simple tasks requiring a knowledge of simple work procedures performed in a fixed or prescribed sequence. The work requires attention to detail, eye-hand coordination, the ability to observe variations in the structure, texture, or other properties of materials (wood, leather, fabric, plastic, or metals). The assignments are designed to provide aids with a knowledge of the basic concepts related to the fabrication of orthotic and prosthetic appliances, and to develop their knowledge, proficiency, and skill in selecting and using hand tools to the level required for acceptable performance of the duties of an orthotist or prosthetist.

Level of responsibility

GS-3 employees receive complete, explicit instructions at the beginning of each assignment, covering work methods, care of equipment and tools, procedures, etc. At any time, supervisors are available to give instruction and guidance. At this level they are expected to perform recurring tasks under supervision which gradually lessens until the more routine tasks are only spot checked or observed. Tasks that require close attention or that are newly assigned to an employee are checked in progress with greater frequency. All work is reviewed for acceptability upon completion.

ORTHOTIC-PROSTHETIC AID, GS-0667-04

Nature of assignment

The work differs from that at GS-3 in that aids at GS-4 carry out a more varied and complex sequence of standardized or prescribed operations. Typically, GS-4 aids fabricate parts for braces, shoes, or prostheses from leather, wood, or metal, using power tools, and specialized equipment. They also make simple repairs of orthotic and prosthetic devices.

Employees at this level are trainees who have acquired through previous education, experience, and training, skill in working with materials and hand tools used in fabricating and repairing orthotic and prosthetic appliances. In addition to this knowledge and the skills and abilities required at the GS-3 level, GS-4 employees must have the ability to absorb on-the-job training and develop skills in the application and operation of power tools and specialized equipment used in fabricating and repairing orthotic and prosthetic appliances; and the methods and techniques used in brazing, welding, forging, and annealing metals. Formal classroom training in anatomy typically supplements the on-the-job instruction.

Level of responsibility

Training and work assignments are under the direct supervision of higher-grade employees. The instructions given at the GS-4 level are more complex and voluminous than is typical for positions at grade GS-3.

The supervisors:

1. Select assignments to provide continuity and variety to training; usually outline each work step until such time as trainees are capable of performing repetitive assignments.
2. Furnish detailed and specific instruction and on-the-job training to demonstrate established methods and procedures.
3. Make frequent observations during work process to assure that procedures are understood and followed; review work upon completion for workmanship, accuracy, and conformance to instructions.
4. Evaluate work performance, learning ability, and progressive achievements to determine whether or not trainees should continue training in their specializations.

ORTHOTIST, GS-0667-05
PROSTHETIST, GS-0667-05
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Nature of assignment

Positions at the GS-5 level differ from those at GS-4 in that they include progressively more intensive training and instruction in fitting and alignment of appliances and more demanding assignments. They measure patients (under close supervision), make models, draft patterns, and repair the more common braces, shoes, or prostheses, such as braces for the trunk and cervical spine, short and long splints for the hand, above-knee prostheses for average length above-knee stumps, below-elbow prostheses for average length below-elbow stumps, arch supports, and shoe modifications. They adjust patterns used in fabricating devices to the individual stance and condition of patients, in order to identify pressure points and to facilitate the fitting process.

Concurrent with training in fitting and alignment principles, the employees typically receive additional instructions in the more complex fabricating procedures such as plaster casting, plastic laminating and leather molding (used in making replicas of disabled body members or parts), and advanced classroom and on-the-job instruction in general anatomy with emphasis on the musculoskeletal system, and the application of the theories of body mechanics in the fitting of orthotic or prosthetic devices.

Employees at this level must apply:

- a knowledge of anatomy through formal classroom training and a basic understanding of the application of the anatomical concepts to orthotic and prosthetic problems;
- the ability to understand the individual needs of patients and to use tact and patience in dealing with patients' problems and viewpoints;
- the ability to demonstrate their basic skill in the use of tools and equipment in combination with basic techniques and procedures to fabricate or repair braces, shoes, or prostheses;
- the ability to take accurate measurements and lay out work.

They fabricate standard items such as trusses, belts, corsets, shoe inserts, artificial feet, ankle bases, and knee blocks that follow established patterns and standard practices; and repair orthoses or prostheses by replacing broken cables or belts. As the employees demonstrate the required level of skill, assignments may include fitting (under close supervision) patients with orthotic or prosthetic appliances such as arch supports, leg or leg-thigh braces.

Level of responsibility

Orthotists and Prosthetists GS-5 have contacts with patients. They must have a keen sense of responsibility and approach patients and their needs with understanding, tact, and patience.

They are expected to work cooperatively with coworkers, doctors, nurses, and other members of the health care team.

Training assignments are performed under direct observation and with specific and detailed instructions from supervisors. Supervision at GS-5 is less direct on assignments involving the fabrication or repair of orthotic or prosthetic devices as the incumbent becomes more skilled and develops proficiency in following standard methods, procedures, and techniques. By comparison, supervisors of GS-4 employees make frequent observations during the work process to assure that procedures are understood and followed

Supervisors of GS-5 employees:

- Discuss the work with and guide the employees in analyzing and defining patient needs and problems.
- Examine all braces, shoes, and other orthotic-prosthetic devices fabricated or repaired.
- Evaluate work performance, progress, achievements, and the attitude of the orthotist or prosthetist.

ORTHOTIST, GS-0667-07
PROSTHETIST, GS-0667-07
ORTHOTIST-PROSTHETIST, GS-0667-07

Nature of assignment

GS-7 orthotists or prosthetists measure and fit patients with all types of custom made orthotic or prosthetic appliances for the more common disability levels, not complicated by unusual physiological conditions. They fabricate orthotic or prosthetic devices which require a high level of skill in working with metals, leather, plastics, fabrics, and other materials.

The work of the GS-7 employee requires the ability to read and understand prescriptions, a thorough grasp of methods, techniques, and the sequence followed in undertaking the development of orthotic or prosthetic appliances; a thorough knowledge of materials and their applications; a basic knowledge of physiology, anatomy, and tissue characteristics in order to recognize physiological abnormalities; and a high level of skill in the use of tools and equipment.

Typical GS-7 assignments involve measuring, fabricating, and fitting patients with braces for the trunk and cervical spine, leg braces and leg-thigh braces; or with prostheses for common disability levels including either short or very long stumps. They also develop forms, lasts, and patterns for the less difficult foot-ankle disabilities. By comparison, GS-5 employees receive training in fitting and alignment.

Level of responsibility

Independent contacts are made with patients, doctors, therapists, nurses, and colleagues. Orthotists and prosthetists at this level may discuss cases with physicians, primarily to receive instructions concerning conditions to be met in fitting the prescribed device. In contrast to the close supervision exercised over GS-5 employees fitting patients, supervisors of GS-7 employees:

1. Make assignments with general instructions, and are available to give special instructions when unusual problems exist or arise.
2. Review work, on a "spot-check" basis, for design, appropriateness of the device to the patients' needs, and quality of workmanship.
3. Are present during final fitting of patients to assure that prescribed support and function are achieved and to insure maximum service to patients.
4. Evaluate work performance, in terms of demonstrated ability, resourcefulness, and success in meeting patients' needs.

ORTHOTIST, GS-0667-09
PROSTHETIST, GS-0667-09
ORTHOTIST-PROSTHETIST, GS-0667-09

Nature of assignment

GS-9 orthotists or prosthetists are recognized as equipped by their background of training and experience to carry out a broad range of established procedures entailed in providing orthotic or prosthetic devices for difficult cases requiring proven ability. They apply a thorough understanding of the application of orthotic or prosthetic devices to complex and serious disabilities, as well as fundamental knowledges and a high level of technical skill in measuring, fabricating, and fitting these devices. Assignments at this level require the ability to analyze and delineate the specific factors to be dealt with in cases, and the ability to apply established orthotic or prosthetic principles, precedents, and practices to the specific problems.

Assignments at the GS-9 level are more complex than at GS-7 in that their accomplishment requires judgment in the independent application of knowledge of a variety of methods and techniques. Typically, GS-9 employees develop the orthotic or prosthetic devices for patients with disabilities at the more difficult levels or with combination disabilities.

Typically, Orthotists GS-9 design and fit a wide variety of types of orthotic devices. Some cases may require gradual orthotic rehabilitation (spastic paraplegic, or hemiplegic patients, and patients seriously disabled with rheumatoid arthritis). Such cases may require the development of a series of orthotic appliances before permanent functional braces can be developed.

Typically, Prosthetists GS-9 design and fit a wide variety of types of prostheses to the upper and lower extremities. Some cases at this level involve the prosthetists fitting temporary prostheses to patients as an immediate post-operative procedure following an amputation. The prosthetists in such cases must be present during surgery, and must follow surgical practices to maintain sterile conditions. They fit and align the prostheses while the patients are anesthetized.

GS-9 employees attend clinics and discuss cases assigned to them with physicians, nurses, therapists, psychologists, and others for the purpose of developing prescriptions for orthotic or prosthetic devices.

Level of responsibility

GS-9 employees have contacts with patients and other members of the medical team as at lower levels, but the contacts are more frequent and require more understanding, skill, and resourcefulness.

At this level, orthotists and prosthetists participate in clinical studies and surveys, reporting problems encountered in fabricating, designing, and fitting orthotic or prosthetic items undergoing evaluation.

Orthotists and Prosthetists GS-9 receive a minimum of technical supervision. By comparison, supervisors of GS-7 employees normally are present during the final fitting of patients. Supervisors of GS-9 employees are available and give advice and assistance as requested, and evaluate work performance in relationship to the acceptability of the devices produced and the adequacy and accuracy of fitting of devices in relationship to patients' needs.