RAILROAD RETIREMENT BOARD

20 CFR Part 220

RIN 3220–AB18

Determining Disability

AGENCY: Railroad Retirement Board.

ACTION: Final rule.

SUMMARY: The Railroad Retirement Board hereby amends its regulations with respect to determining when an employee is disabled for his or her regular railroad occupation. This final rule gives effect to an agreement between railroad labor and railroad management consistent with section 2(a)(2) of the Railroad Retirement Act which provides that labor and management shall cooperate with the Board in developing standards for determining when an employee's physical or mental condition disables him or her for work in his or her regular railroad occupation and thus there exists good cause not to delay its effectiveness beyond date of publication.

DATES: *Effective date:* This rule is effective February 13, 1998.

Applicability date: This rule shall be applicable February 13, 1998, but only with respect to applications for a disability annuity filed on or after January 1, 1998.

ADDRESSES: Secretary to the Board, Railroad Retirement Board, 844 North Rush Street, Chicago, Illinois 60611.

FOR FURTHER INFORMATION CONTACT: Thomas W. Sadler, Senior Attorney, Railroad Retirement Board, 844 North Rush Street, Chicago, Illinois 60611, (312) 751–4513, TDD (312) 751–4701.

SUPPLEMENTARY INFORMATION: Section 2(a)(2) of the Railroad Retirement Act (45 U.S.C. 231a(a)(2)) provides that the Board, with the cooperation of employers and employees, shall secure the establishment of standards determining the physical and mental conditions which permanently disqualify employees from performing their regular occupation in the railroad industry. The Board has never formally adopted such standards. The agency, in the past, has used provisional standards which were adopted in 1946 but which are now outdated. In 1991 the Board adopted Subpart C of Part 220 which provides for determining disability for work in an employee's regular railroad occupation. Under this regulation if an employee's physical or mental condition does not meet a listing found in Appendix 1 of Part 220 (which determines if an individual is able to engage in any employment both within and outside the railroad industry), the Board determines the employee's residual functional capacity and compares that to the demands of his or her regular railroad occupation to determine if the employee can continue to perform that job. However, Subpart C contains no specific standards which relate to specific railroad occupations. The Board amends Subpart C to add such standards with respect to certain railroad occupations.

Section 220.10 provides for the establishment of an Occupational Disability Advisory Committee made up of two physicians, one from recommendations from rail labor, one from recommendations of rail management. This committee shall review, from time to time, the disability standards developed by this regulation and the Occupational Disability Claims Manual (Manual) which supplements this regulation. The Board shall confer with this Committee before it amends this regulation or the Manual. It should be noted that the Board is not an agency subject to the Federal Advisory Committee Act. Accordingly, the Occupational Disability Advisory Committee will not be subject to that Act.

Section 220.11 contains the definitions of ''regular railroad occupation'', ''permanent physical and mental impairment'', and ''residual functional capacity'' as presently found in Part 220. In addition, it adds the definitions of ''independent case evaluation'' and ''functional capacity test''.

The current § 220.12 is removed, and the current § 220.14 ''Evidence Considered'' is redesignated § 220.12.

The introductory language and paragraph (a) of section 220.13 follow the present regulation and describe the sequential evaluation process for determining disability for an employee's regular railroad occupation. Initially, if an employee has been medically disqualified by his employer, the Board will presume that the employee is disabled for his regular railroad occupation if there is any objective medical evidence to support that determination. If the employee has not been so disqualified, the Board will determine if the employee's impairment(s) meet or equal a listing found in Appendix 1.

Section 220.13(b)(1) provides that if an employee has not been found disabled in the first two steps described above, the Board will then determine the employee's regular railroad occupation, based upon the employee's description of his or her job.

Section 220.13(b)(2)(i) provides that next the Board will determine if an employee's regular railroad occupation and impairment(s) are covered under the standards contained in a new Appendix 3 to Part 220. If both the occupation and impairment(s) are covered, the Board will confirm the existence of the impairment(s) by using the tests listed in Appendix 3 or by other valid diagnostic tests which could be used to establish an impairment as provided for in § 220.27 of this part. (Section 220.13(b)(2)(ii) of the proposed rule has been revised to clarify how an impairment is confirmed and that if an employee's impairment(s) cannot be confirmed, as provided for in this section, the employee will be found not disabled.) Once the impairment(s) is confirmed, Appendix 3 is applied to determine if the employee is disabled. (Section 220.13(b)(2)(iii).)

If the employee's regular railroad occupation and impairment(s) are not covered by Appendix 3, or if the medical evidence contains significant differences in interpretation of objective test findings which cannot be readily resolved, then the Board will not use Appendix 3, but will determine if the employee is disabled using an independent case evaluation (ICE) as set forth in § 220.13(b)(2)(iv). Likewise, if Appendix 3 does not yield a ''disabled'' finding, ICE will apply.

Section 220.13(b)(2)(iv), which describes ICE, is essentially a more detailed description of the process, which is described in § 220.13(b)(3) of the present regulation. Under this process the Board initially determines whether the evidence is complete (Step 1). The Board next confirms any impairment which has not been confirmed under § 220.13(b)(2)(ii) (Step 2). Next, the Board will determine whether there is a concordance of medical findings among physicians. If there is not, the Board will request additional medical evidence from the employee's treating physician(s) or procure additional consulting exams (Step 3). Once the Board establishes a concordance of medical findings, to the extent that it is possible, it will then assess the quality of the medical evidence under the factors set forth in § 220.14. This section sets forth factors which either support or call into question the validity of the medical findings. Thus, for example, the opinion of a treating physician, which is fully supported by medically acceptable clinical and diagnostic techniques, is given greater weight than one that is not so supported or is inconsistent with findings of other medical sources. Likewise, the claimant's description of

his or her own condition, if consistent with objective medical findings, is given more weight than one that is not consistent (Step 4). If, after assessment, the Board determines that there is no substantial objective evidence of an impairment, the Board will determine that the employee is not disabled.

If through the assessment in Step 4 it is determined that there is substantial objective evidence of an impairment, then in Step 5 the Board will determine the demands of the employee's regular railroad occupation. At this point, the Board will not only consider the employee's own description of his or her job, but also the employer's description as well as other sources such as the Dictionary of Occupational Titles and generic descriptions found in the Occupational Disability Claims Manual.

Next, the Board will determine the employee's residual functional capacity based upon the assessment performed in Step 4 and compare it to the job demands determined in Step 5. If the demands of the employee's regular railroad occupation exceed the employee's residual functional capacity, then the Board will find the employee disabled. If the demands do not exceed the residual functional capacity, then the Board will find the employee not disabled (Step 6).

The Board published this regulation as a proposed rule on September 24, 1997 (62 FR 50056), and invited comments by October 24, 1997. Two comments were received. One commentator suggested that the Board adopt the vision and hearing acuity requirements found in 49 CFR 240.121, which have been adopted by the Federal Railroad Administration for certification of locomotive engineers. However, the Board does not feel such a change is needed since an engineer who is disqualified by his employer for failure to meet the requirements of 49 CFR 240.121 would ordinarily be presumed disabled under the first paragraph of § 220.13. Another commentator expressed support for the regulation because it was in accord with an agreement reached in July 1997 between representatives of rail labor and rail management concerning occupational disability.

The final rule contains an Introduction to Appendix 3 which explains how to use the Appendix. In addition, the Board has corrected typographical errors in Appendix 3, and made the following substantive changes in Appendix 3 based upon advice from physicians representing rail labor and rail management:

A. Cancer

- 62 FR 50064—Under Assessment, second paragraph, second line, the phrase ''in the Tables'' was inserted after ''All railroad occupations.''
- 62 FR 50065—Footnote 3, Functional Impacts, the reference to ''(MS) Minimally Significant'' was deleted.
- 62 FR 50066—Footnote 5 was deleted and footnote 6 was redesignated footnote 5.

C. Cardiac

- 62 FR 50066—The confirmatory test for coronary artery disease, angiography,''Definite significant (>60%) of one vessel,'' was changed to ''Definite occlusion (>60%) of one vessel.''
- 62 FR 50067 through 50075—The disability tests, test results and disability classifications for ''Echocardiogram'' and ''Cardiac catheterization'' with results of ''Decreased ejection fraction 40–55%'' were deleted for all job titles. These tests were found in the proposed rule under the listings Angina, Aortic valve disease, Cardiomyopathy, Mitral valve disease, and Pericardial disease.
- 62 FR 50067 through 50075—The disability tests for ''Echocardiogram'' and ''Cardiac catheterization'' with results of ''Poor ejection fraction <35%'' were revised to read ''Poor ejection fraction ≤35%'' for all job titles. These tests were found in the proposed rule under the listings Angina, Aortic valve disease, Cardiomyopathy, Mitral valve disease, and Pericardial disease.
- 62 FR 50067, 50071 and 50072—In the proposed rule one of the disability tests for ''Mitral valve disease'' for trainman, signalman and trackman was ''Cardiac catheterization'' with a test result of ''Mitral valve gradient >10mm Hg.'' This disability test, and its test result and disability classification was deleted. Another test result under ''Mitral valve disease'' for ''Cardiac catheterization'' was ''Mitral valve gradient 5–10mm Hg.'' This test result was changed to ''Mitral valve gradient ≥5mm Hg.''
- 62 FR 50068, 50069, 50070, 50073, 50074, 50075—One of the disability tests for ''Mitral valve disease'' for engineer, dispatcher, carman, machinist, shop laborer, sales representative, and general office clerk was ''Cardiac catheterization'' with a test result of ''Mitral valve gradient 5–10mm Hg.'' This disability test, and its test result and disability classification was deleted. Another test result under ''Mitral valve disease'' for ''Cardiac catheterization'' was ''Mitral valve gradient >10mm Hg.'' This result was changed to ''Mitral valve gradient ≥10mm Hg.''
- 62 FR 50067, 50070, 50071, 50072—For job titles trainman, signalman, and trackman the disability tests were revised as follows:

Angina

—Stress test with a result of ''Peak exercise 5–7 METS'' the disability test, test result, and disability classification were deleted.
—Stress test with a result of ''Peak exercise <5 METS'' was revised to read ''Stress test—Peak exercise ≤7 METS.''
—Stress test with a result of ''Definite ischemia <7 METS'' was revised to read ''Stress test: Significant ST changes—Definite ischemia ≤7 METS.''
—Stress test with a result of ''Definite ischemia >7 METS'': the disability test, test result, and disability classification were deleted.

Aortic Valve Disease

—Stress test with a result of ''Peak exercise 5-7 METS'': the disability test, test result, and disability classification were deleted.
—Stress test with a result of ''Peak exercise <5 METS'' was revised to read: ''Peak exercise ≤7 METS.''

Coronary Artery Disease

—Stress test with a result of ''Peak exercise 5–7 METS'': the disability test, test result, and disability classification were deleted.
—Stress test with a result of ''Peak exercise <5 METS'' was revised to read: ''Stress test —Peak exercise ≤7 METS.''
—Stress test with a result of ''Definite ischemia < or >7 METS'' was revised to read: ''Stress test—Definite ischemia ≤7 METS.''
—Isotope, e.g., thallium study with a result of ''Definite ischemia < or >7 METS'' was revised to read: ''Isotope, e.g., thallium study—definite ischemia ≤7 METS.''

Cardiomyopathy

—Stress test with a result of ''Peak exercise 5–7 METS'' was revised to read: ''Stress test—Peak exercise ≤7 METS.''

Mitral Valve Disease

—Stress test with a result of ''Peak exercise 5–7 METS'' was revised to read: to ''Peak exercise ≤7 METS.''

- 62 FR 50067, 50068, 50069, 50070, 50072, 50073, 50074, 50075—For job titles engineer, dispatcher, carman, machinist, shop laborer, sales representative, and general office clerk

the disability tests were revised as follows:

Angina

—Stress test with a result of ''Peak exercise 5–7 METS'' the disability test, test result and disability classification were deleted.
—Stress test with a result of ''Peak exercise <5 METS'' was revised to read: ''Stress test—Peak exercise ≤5 METS.''
—Stress test: significant ST changes with a result of ''Definite ischemia <7 METS'' was revised to read: ''Stress test—Definite ischemia ≤5 METS.''
—Stress test: significant ST changes with a result of ''Definite ischemia >7 METS'': the disability test, test result, and disability classification were deleted.

Aortic Valve Disease

—Stress test with a result of ''Peak exercise 5–7 METS'': the disability test, test result, and disability classification were deleted.
—Stress test with a result of ''Peak exercise <5 METS'' was revised to read: ''Stress test—Peak exercise ≤5 METS.''

Coronary Artery Disease

—Stress test with a result of ''Peak exercise 5–7 METS'': the disability test, test result, and disability classification were deleted.
—Stress test with a result of ''Peak exercise <5 METS'' was revised to read: ''Stress test—Peak exercise ≤5 METS.''
—Stress test with a result of ''Definite ischemia < or >7 METS'' was revised to read: ''Stress test—Definite ischemia ≤5 METS.''
—Isotope, e.g., thallium study with a result of ''Definite ischemia < or >7 METS'' was revised to read: ''Isotope, e.g., thallium study—Definite ischemia ≤5 METS.''

Cardiomyopathy

—Stress test with a result of ''Peak exercise 5–7 METS'' was revised to read: ''Stress test—Peak exercise ≤5 METS.''

Mitral Valve Disease

—Stress test with a result of ''Peak exercise 5–7 METS'' was revised to read: ''Stress test—Peak exercise ≤5 METS.''

• 62 FR 50067 through 50074—For job titles trainman, engineer, dispatcher, carman, signalman, trackman, machinist, and shop laborer, under the listing of ''Hypertension,'' the disability test of ''Medical record review'' with a result of ''Diastolic >120 and systolic >160, 50% of the time''; the disability test, test result, and disability classification were deleted. For sales representative, under the listing ''Hypertension,'' the disability test of ''Medical record review'' with a result of ''Diastolic >120 and systolic >160, 50% of the time'': the following was added: ''and evidence of end organ damage (blood creatinine >2; urinary protein >½ gm; or EKG evidence of ischemia).''

• 62 FR 50067 through 50075—For all job titles, under ''Ventricular ectopy,'' the disability test of ''Medical record review'' with a result of ''Surgical rhythm procedure'' and the disability classification were deleted.

D. Respiratory

• 62 FR 50076 through 50080—The listing ''Asbestosis'' was removed and, consequently, the designated confirmatory tests for this condition were also removed.

• 62 FR 50076 through 50080—The listing ''Sleep Apnea'' was removed and, consequently, the designated confirmatory tests for this condition were also removed.

• 62 FR 50076—The confirmatory tests for ''Silicosis,'' ''Chest X-ray (ILO interpreted)'' with a minimum result of ''At least 1/0 by NIOSH B reader,'' was removed.

• 62 FR 50076—The confirmatory test for ''Restrictive lung disease'' designated ''Diffusing capacity'' was changed to read: ''DLCO.''

• 62 FR 50076—The parenthetical ''(race adjusted)'' in the confirmatory test ''Spirometry'' for ''Restrictive lung disease'' was removed.

• 62 FR 50077 through 50080—The disability test for ''Pulmonary fibrosis'' and ''Restrictive lung disease'' for trainman, carman, signalman, trackman, machinist, and shop laborer designated ''Diffusing capacity for CO'' was changed to read: ''DLCO.''

• 62 FR 50076 through 50080—The disability test for ''Asthma'' and ''Chronic bronchitis'' for trainman, carman, signalman, trackman, machinist, and shop laborer designated ''Spirometry'' has an accompanying test result of ''FEV1 with adequate treatment <40% predicted.'' The test result was changed to: ''Repeated spirometry FEV1 <40% over a 12-month period.''

• 62 FR 50077 through 50080—Under the listing Bronchiectasis, Chronic Bronchitis, Chronic Obstructive Pulmonary Disease (COPD), Pulmonary Fibrosis, and Silicosis for the job titles trainman, carman, signalman, trackman, machinist, and shop laborer the disability test ''PCO2 arterial'' was changed to read: ''Resting ABG,'' and its accompanying test result was revised to read: ''PCO2 arterial >50mm Hg if stable.''

• 62 FR 50077 through 50080—Under the listings Bronchiectasis, Chronic Bronchitis, Chronic Obstructive Pulmonary Disease (COPD), and Pulmonary Fibrosis for the job titles trainman, carman, signalman, trackman, machinist, and shop laborer the disability test ''Pulmonary exercise test'' with a test result of ''PO2 drop >5 torr at maximum exercise'' was changed to read ''Pulmonary exercise test or exercise ABG.''

F. CE Spine

• 62 FR 50093—Under the listing ''Rheumatoid arthritis: cervical'' the minimum result under the confirmatory test of ''Rheumatoid factor (blood test)'' was changed from ''High titer'' to ''Titer of rheumatoid factor.''

• 62 FR 50094 through 50097—The disability test for ''Spondylogenic compression of spinal cord:'' for trainman, engineer, carman, signalman, trackman, machinist, and shop laborer designated ''Physical examination: lower limb'' has an accompanying test result of ''Lower extremity weakness or spasticity.'' The test result was changed to: ''Lower extremity weakness or significant spasticity.''

• 62 FR 50094 through 50097—The disability test for trainman, engineer, carman, signalman, trackman, machinist, and shop laborer designated ''Physical examination: cervical'' was changed to read ''Physical examination.'' This disability test can be found under the listings Cervical disc disease with myelopathy, Chronic herniated disc, Cervical spondylolysis, Cervical intervertebral disc degeneration, Fracture: posterior element with spinal canal displacement, Post-laminectomy syndrome, Cervical radiculopathy, and Spondylogenic compression of spinal cord.

G. Shoulder

• 62 FR 50097—The confirmatory test ''Permanent functional limitation, elbow:'' was changed to ''Medical diagnosis leading to a permanent functional limitation of the elbow.''

• 62 FR 50098 through 50099—The disability test for trainman, engineer, carman, signalman, trackman, machinist, and shop laborer under the listing ''Permanent functional limitation, elbow:'' was ''Physical examination—range of motion.'' Its accompanying test result ''Flexion limit to 60 degrees (30 degrees from 90)'' was changed to ''Flexion limited to 60 degrees.''

H. Hand and Arm

• 62 FR 50099—The confirmatory tests for ''Carpal tunnel syndrome'' designated ''Physical examination'' with a minimum result of ''Tinel's or Phalen's sign suggestive but not confirming'' was removed.

• 62 FR 50099—One of the confirmatory tests for ''Rheumatoid arthritis: hand'' is ''Rheumatoid factor.'' The minimum result for this test was changed from ''High titer'' to ''Titer of rheumatoid factor.''

• 62 FR 50100 through 50104—A disability test for trainman, carman, signalman, trackman, machinist, and shop laborer was ''Strength (jamar)'' with a test result for dominant and non-dominant hands for female and male. All references to these tests, their results and disability classifications were deleted. These disability tests were found in the proposed rule under the listings: Carpal tunnel syndrome, Fracture wrist, Hand permanent functional limitation, and Wrist permanent functional limitation.

• 62 FR 50100 through 50104—Two of the disability tests for the listing ''Thumb: permanent functional limitation'' were ''Adduction of thumb'' and ''Opposition'' with a result of ''Loss <=7 cm.'' These disability tests, test results, and disability classifications were removed for all job titles.

I. Hip

• 62 FR 50105—One of the confirmatory tests for ''Paget's disease'' is ''X-ray: hip.'' The minimum result for this test was changed from ''Osteolytic and blastic lesions'' to ''Osteolytic or blastic lesions.''

J. Knee

• 62 FR 50108—The confirmatory test for ''Patellar-7 subluxation-recurrent'' is a ''Medical record review.'' The minimum result for this testing in the proposed rule was ''History of recurrent subluxation with associated signs.'' The phrase ''with associated signs'' was removed.

K. Ankle and Foot

• 62 FR 50116 through 50120—One of the disability tests for the listing ''Rheumatoid arthritis, foot:'' is a ''Medical record review.'' Its accompanying test result in the proposed rule was ''Frequent flare-up with treatment.'' This test result was changed to ''Chronic flare-up with treatment.''

The Board has determined that this is a significant rule under Executive Order 12866. The Office of Management and Budget has approved the information collection (Job Information Report, RRB Forms G–251a and G–251b found in Appendix 3 of this part) associated with this rule and assigned it OMB control number 3220–0193.

List of Subjects in 20 CFR Part 220

Disability benefits, Railroad employees, Railroad retirement, Reporting and recordkeeping requirements.

For the reasons set forth in the preamble, part 220 of title 20 of the Code of Federal Regulations is amended as follows:

PART 220—DETERMINING DISABILITY

1. The authority citation for part 220 continues to read as follows:

Authority: 45 U.S.C. 231a; 45 U.S.C. 231f.

2. The heading of subpart C is revised to read as follows:

Subpart C—Disability Under the Railroad Retirement Act for Work in an Employee's Regular Railroad Occupation

3. Section 220.10 is revised to read as follows:

§ 220.10 Disability for work in an employee's regular railroad occupation.

(a) In order to receive an occupational disability annuity an eligible employee must be found by the Board to be disabled for work in his or her regular railroad occupation because of a permanent physical or mental impairment. In this subpart the Board describes in general terms how it evaluates a claim for an occupational disability annuity. In accordance with section 2(a)(2) of the Railroad Retirement Act this subpart was developed with the cooperation of employers and employees. This subpart is supplemented by an Occupational Disability Claims Manual (Manual) [1] which was also developed with the cooperation of employers and employees.

(b) In accordance with section 2(a)(2) of the Railroad Retirement Act, the Board shall select two physicians, one from recommendations made by representatives of employers and one from recommendations made by representatives of employees. These individuals shall comprise the Occupational Disability Advisory Committee (Committee). This Committee shall periodically review, as necessary, this subpart and the Manual and make recommendations to the Board with respect to amendments to this subpart or to the Manual. The Board shall confer with the Committee before it amends either this subpart or the Manual.

4. Section 220.11 is revised to read as follows:

§ 220.11 Definitions as used in this subpart.

Functional capacity test means one of a number of tests which provide objective measures of a claimant's maximal work ability and includes functional capacity evaluations which provide a systematic comprehensive assessment of a claimant's overall strength, mobility, endurance and capacity to perform physically demanding tasks, such as standing, walking, lifting, crouching, stooping or bending, climbing or kneeling.

Independent Case Evaluation (ICE) means the process for evaluating claims not covered by Appendix 3 of this part.

Permanent physical or mental impairment means a physical or mental impairment or combination of impairments that can be expected to result in death or has lasted or can be expected to last for a continuous period of not less than 12 months.

Regular railroad occupation means an employee's railroad occupation in which he or she has engaged in service for hire in more calendar months than the calendar months in which he or she has been engaged in service for hire in any other occupation during the last preceding five calendar years, whether or not consecutive; or has engaged in service for hire in not less than one-half of all of the months in which he or she has been engaged in service for hire during the last preceding 15 consecutive calendar years. If an employee last worked as an officer or employee of a railway labor organization and if continuance in such employment is no longer available to him or her, the ''regular occupation'' shall be the position to which the employee holds seniority rights or the position which he or she left to work for a railway labor organization.

Residual functional capacity has the same meaning as found in § 220.120.

§ 220.12 [Removed]

§ 220.14 [Redesignated as § 220.12]

5. The current § 220.12 ''Permanent physical or mental impairment, defined.'' is removed, and § 220.14 ''Evidence considered.'' is redesignated as § 220.12.

6. Section 220.13 is amended by revising the section heading, the introductory text, and paragraph (b) to read as follows:

[1] The Manual may be obtained from the Board's headquarters at 844 North Rush Street, Chicago, IL 60611.

§ 220.13 Establishment of permanent disability for work in regular railroad occupation.

The Board will presume that a claimant who is not allowed to continue working for medical reasons by his employer has been found, under standards contained in this subpart, disabled unless the Board finds that no person could reasonably conclude on the basis of evidence presented that the claimant can no longer perform his or her regular railroad occupation for medical reasons. (See § 220.21 if the claimant is not currently disabled, but was previously occupationally disabled for a specified period of time in the past). The Board uses the following evaluation process in determining disability for work in the regular occupation:

* * * * *

(b) If the Board finds that the claimant does not have an impairment described in paragraph (a) of this section, it will—

(1) Determine the employee's regular railroad occupation, as defined in § 220.11, based upon the employee's own description of his or her job;

(2) Evaluate whether the claimant is disabled as follows:

(i) The Board first determines whether the employee's regular railroad occupation is an occupation covered under Appendix 3 of this part. Second, the Board will determine whether the employee's claimed impairment(s) is covered under Appendix 3 of this part. If claimant's regular railroad occupation or impairment(s) is not covered under Appendix 3 of this part, then the Board will determine if the employee is disabled under ICE as set forth in paragraph (b)(2)(iv) of this section.

(ii)(A) If the Board determines that, in accordance with paragraph (b)(2)(i) of this section, Appendix 3 of this part applies, then the Board will confirm the existence of the employee's impairment(s) using—

(*1*) The ''highly recommended'' and ''recommended'' tests set forth in Appendix 3 of this part that relate to the body part affected by the claimant's impairment(s); or

(*2*) By using valid diagnostic tests accepted by the medical community as described in § 220.27.

(B) If the employee's impairment(s) cannot be confirmed because there are significant differences in objective tests such as imaging study, electrocardiograms or other test results, and these differences cannot be readily resolved, the Board will determine if the employee is disabled under ICE as set forth in paragraph (b)(2)(iv) of this section. However, if the employee's impairment(s) cannot be confirmed, and there are no significant differences in objective medical tests which cannot be readily resolved, then the employee will be found not disabled.

(iii) Once the impairment(s) is confirmed, as provided for in paragraph (b)(2)(ii) of this section, the Board will apply Appendix 3 of this part. If Appendix 3 of this part dictates a ''D'' (disabled) finding, the Board will find the claimant disabled.

(iv) If the Board does not find the employee disabled using the standards in Appendix 3 of this part, then the Board will determine if the employee is disabled using ICE. To evaluate a claim under ICE the Board will use the following steps:

(A) *Step 1.* The Board will determine if the medical evidence is complete. Under this step the Board may request the claimant to take additional medical tests such as a functional capacity test or other consultative examinations;

(B) *Step 2.* If the employee's impairment(s) has not been confirmed, as provided for in paragraph (b)(2)(ii)(A)(*2*) of this section, the Board will next confirm the employee's impairment(s), as described in paragraph (b)(2)(ii)(A)(*2*) of this section;

(C) *Step 3.* The Board will determine whether the opinions among the physicians regarding medical findings are consistent, by reviewing the employee's medical history, physical and mental examination findings, laboratory or other test results, and other information provided by the employee or obtained by the Board. If such records reveal that there are significant differences in the medical findings, significant differences in opinions concerning the residual functional capacity evaluations among treating physicians, or significant differences between the results of functional capacity evaluations and residual functional capacity examinations, then the Board may request additional evidence from treating physicians, additional consultative examinations and/or residual functional capacity tests to resolve the inconsistencies;

(D) *Step 4.* When the Board determines that there is concordance of medical findings, then the Board will assess the quality of the evidence in accordance with § 220.112, which describes the weight to be given to the opinions of various physicians, and § 220.114, which describes how the Board evaluates symptoms such as pain. The Board will also assess the weight of evidence by utilizing § 220.14, which outlines factors to be used in determining the weight to be attributed to certain types of evidence. If, after assessment, the Board determines that there is no substantial objective evidence of an impairment, the Board will determine that the employee is not disabled;

(E) *Step 5.* Next, the Board determines the physical and mental demands of the employee's regular railroad occupation. In determining the job demands of the employee's regular railroad occupation, the Board will not only consider the employee's own description of his or her regular railroad occupation, but shall also consider the employer's description of the physical requirements and environmental factors relating to the employee's regular railroad occupation, as provided by the employer on the appropriate form set forth in Appendix 3 of this part, and consult other sources such as the Dictionary of Occupational Titles and the job descriptions of occupations found in the Occupational Disability Claims Manual, as provided for in § 220.10;

(F) *Step 6.* Based upon the assessment of the evidence in paragraph (b)(2)(iv)(D) of this section, the Board shall determine the employee's residual functional capacity. The Board will then compare the job demands of the employee's regular railroad occupation, as determined in paragraph (b)(2)(iv)(E) of this section. If the demands of the employee's regular railroad occupation exceed the employee's residual functional capacity, then the Board will find the employee disabled. If the demands do not exceed the employee's residual functional capacity, then the Board will find the employee not disabled.

7. A new section 220.14 is added to read as follows:

§ 220.14 Weighing of evidence.

(a) *Factors which support greater weight.* Evidence will generally be given more weight if it meets one or more of the following criteria:

(1) The residual functional capacity evaluation is based upon functional objective tests with high validity and reliability;

(2) The medical evidence shows multiple impairments which have a cumulative effect on the employee's residual functional capacity;

(3) Symptoms associated with limitations are consistent with objective findings;

(4) There exists an adequate trial of therapies with good compliance, but poor outcome;

(5) There exists consistent history of conditions between treating physicians and other health care providers.

(b) *Factors which support lesser weight.* Evidence will generally be given lesser weight if it meets one or more of the following criteria:

(1) There is an inconsistency between the diagnoses of the treating physicians;

(2) There is inconsistency between reports of pain and functional impact;

(3) There is inconsistency between subjective symptoms and physical examination findings;

(4) There is evidence of poor compliance with treatment regimen, keeping appointments, or cooperating with treatment;

(5) There is evidence of exam findings which is indicative of exaggerated or potential malingering response;

(6) The evidence consists of objective findings of exams that have poor reliability or validity;

(7) The evidence consists of imaging findings which are nonspecific and largely present in the general population;

(8) The evidence consists of a residual functional capacity evaluation which is supported by limited objective data without consideration for functional capacity testing.

8. Appendix 3—Railroad Retirement Board Occupational Disability Standards is added to part 220 to read as follows:

Appendix 3—Railroad Retirement Board Occupational Disability Standards

1. Introduction

1.01 The Board uses this appendix to adjudicate the occupational disability claims of employees with medical conditions and job titles covered by the Tables in this appendix. The Tables are divided into ''Body Parts'', with each Body Part further divided by job title. Under each job title there is a list of impairments and tests with accompanying test results which establish a finding of ''D'' (disabled). The use of these Tables is a three-step process. In the first step we determine whether the employee's regular railroad occupation is covered by the Tables; next we establish the existence of an impairment covered by the Tables; finally, we reach a disability determination. If we do not find an employee disabled under these Tables, the employee may still be found disabled using Independent Case Evaluation (ICE), as explained in subpart C of this part.

1.02 The Cancer Tables are treated in a different way than other body systems. Different types of cancer and their treatments have different functional impacts. In the Cancer Tables the impact of the impairment is seen as being significant or not significant. Therefore, these tables contain an ''S'' (significant) which is equivalent to a ''D'' rating. A detailed explanation of how to use those tables is in that section. The steps to use the remaining Tables are explained below:

2. Confirming the Impairment

2.01 Once we determine that the employee's regular railroad occupation is covered by the Job Titles in the Tables, we must determine the existence of an impairment covered by the Tables. This is done through the use of Confirmatory Tests. These tests can include information from medical records, surgical or operative reports, or specific diagnostic test results. Confirmatory Tests are listed in the initial section regarding each Body Part covered in the Tables. If an impairment cannot be confirmed because of inconsistent medical information, ICE may be required.

2.02 There are two types of Confirmatory Tests as follows.

2.03 ''Highly Recommended'' Tests—The designation of a confirmatory test as being ''highly recommended'' means that the test is almost always performed to confirm the existence of the impairment. For many conditions, only one ''highly recommended'' test finding is suggested to confirm the impairment. However, there may be times when that test is not available or is negative, but other more detailed testing confirms the impairment.

2.04 *Example A:* To confirm the condition of pulmonary hypertension, the Tables under Body Part C., Cardiac, designate as ''highly recommended'': an electrocardiogram which indicates definite right ventricular hypertrophy. However, the impairment may also be confirmed by insertion of a Swan-Ganz catheter into the pulmonary artery and the pulmonary artery pressure measured directly.

2.05 There may be some conditions for which several ''highly recommended'' tests are suggested to confirm an impairment. In these circumstances, we will use all ''highly recommended'' tests to establish the existence of the impairment.

2.06 *Example B:* Under Body Part E., Lumbar Sacral Spine, three highly recommended medical findings are identified for the diagnosis of chronic back pain, not otherwise specified. These findings include:

A. A history of back pain under medical treatment for at least one year, and

B. A history of back pain unresponsive to therapy for at least one year, and

C. A history of back pain with functional limitations for at least one year.

2.07 All three of these criteria must be satisfied to confirm the existence of chronic back pain.

2.08 Sometimes the employee may have undergone detailed testing which is as reliable as one of the ''highly recommended'' tests listed in the Tables. In cases where an impairment has not been confirmed by one of the designated ''highly recommended'' tests, the impairment may still be confirmed by ''recommended'' tests (see below) or by evidence acceptable under section 220.27 of this part.

2.09 Recommended Tests—The designation of a confirmatory test as ''recommended'' means that the test need not be performed, or be positive, to confirm the impairment. However, a positive test provides significant support for confirming the impairment. If there are no ''highly recommended'' tests for confirming the impairment, at least one of the ''recommended'' tests should be positive.

2.10 There are two categories of recommended tests which are described below.

A. *Imaging studies*—These studies can include MRI, CAT scan, myelogram, or plain film x-rays. For conditions where several of these imaging studies are identified as ''recommended'' tests, at least one of the test results should be positive and meet the confirmatory test criteria. For some conditions, such as degenerative disc condition, there are several equivalent imaging methods to confirm a diagnosis.

B. *Other tests*—This category of tests refers to non-imaging studies.

2.11 If there are no ''highly recommended'' confirmatory tests designated to confirm an impairment and the ''recommended'' confirmatory tests only include non-imaging procedures, at least one of these tests should be positive to confirm the impairment. The greater the number of tests that are positive, the greater the confidence that the correct diagnosis has been established.

2.12 *Example:* Under Body Part C., Cardiac, the diagnostic confirmatory tests for ventricular ectopy, a cardiac arrhythmia, include the following ''recommended'' tests:

A. Medical record review, i.e., a review of the claimant's medical records, or

B. Holter monitoring, or

C. Provocative testing producing a definite arrhythmia.

2.13 In this situation, only one of the ''recommended'' confirmatory tests need be positive to confirm the impairment. However, the more tests that are positive, the stronger the support for the diagnosis.

2.14 In no circumstance will the Board require that an invasive test be performed to confirm an impairment. Several of the Confirmatory Tests which are described in the Tables are invasive and it is not the intention of the Board to suggest that these be performed. The inclusion of invasive tests in the Tables Confirmatory Tests section is intended to help the Board evaluate the significance of findings from such tests that may have already been performed and which are part of the submitted medical record.

2.15 If an employee's impairment(s) cannot be confirmed by use of the confirmatory tests listed in the Tables, it still may be confirmed by medical evidence described in section 220.27 of this part. However, if a claimant's impairment(s) cannot be confirmed through use of the Tables or under section 220.27, and the medical evidence is complete and in concordance, the claimant will be found not disabled.

3. Disability Determination

3.01 Once the Board determines that the employee's regular railroad occupation is covered by one of the Job Titles in the Tables and that his or her alleged impairment fits into a Body Part covered by the Tables and can be confirmed, we examine the results of any of the disability tests listed under the impairment. If the results from any of these tests indicate a ''D'' finding, the employee is found disabled. If none of the test results

indicate a ''D'' finding, then the employee's claim is evaluated using ICE.

3.02 *Example:* A trainman has angina as confirmed by the recommended tests under Body Part A: Cardiac—Angina. An echocardiogram shows that he has poor ejection fraction ≤35%. The employee is rated disabled. If none of the results of the listed disability tests match the results required for a ''D'' finding, then the employee's claim is evaluated under ICE.

Tables

A. Cancer
B. Endocrine
C. Cardiac
D. Respiratory
E. Lumbar Sacral Spine
F. Cervical Spine
G. Shoulder and Elbow
H. Hand and Arm
I. Hip
J. Knee
K. Ankle and Foot

A. Cancer

Cancer

Cancer conditions can be viewed as belonging to one of three categories.

Category 1: Significant impact on functional capacity or anticipated life span.

Category 2: Intermediate impact on functional capacity; large individual variability.

Category 3: No significant impact on functional capacity or expected life span.

The factors that are considered in developing these categories include the following:

Type of Cancer

The functional impact of different malignancies varies tremendously and each malignancy has to be considered on an individual basis.

Magnitude of Disease

The disability standards are based upon the magnitude or extent of disease. The extent of disease affects both anticipated life span and the functional capacity or work ability of the individual. Localized cancer including cancer ''in situ'' can frequently be completely cured and not have an impact on functional capacity or life span. In contrast, many cancers that have distant or significant regional spread generally have a poor prognosis. The magnitude or extent of disease is classified into three categories: local, regional and distant.

The criteria which are used to classify a cancer into one of the three categories are based upon the distillation of several staging methods into a single system [Miller, et al. (1992). Cancer Statistics Review, 1973 - 1989; NIH Publication No. 92 - 2789].

Effects of Treatment

Although some types of cancer may be potentially curable with radical surgery and/or radiation therapy, the treatment regimen may result in a significant impairment that could affect functional capacity and ability to work. For example, a person with a laryngeal tumor which had spread regionally could be cured by a complete laryngectomy and radiotherapy. However, this treatment could result in a loss of speech and significantly impair the individual's communicative skills or ability to use certain types of respiratory protective equipment.

Prognosis

Some cancers may have minimal impact on a person's functional capacity, but have a very poor prognosis with respect to life expectancy. For example, an individual with early stage brain cancer may be minimally impaired, but have a poor prognosis and minimal potential for surviving longer than two years. Five and two year survival data are presented in the Cancer Disability Guideline Table which follows.

The Cancer Disability Guideline Table provides information concerning the probability of survival for five years for local, regional, and distant disease for each type of malignancy. In addition, two-year survival data are also presented for all disease stages. The five-year survival data are based upon data collected from population-based registries in Connecticut, New Mexico, Utah, Hawaii, Atlanta, Detroit, Seattle and the San Francisco and East Bay area between 1983 and 1987 (Miller, 1992). The two-year data are from a cohort study initially diagnosed in 1988.

Assessment

The malignancies are classified as disabling (Category 1), potentially disabling (Category 2) and non-disabling (Category 3). Category 2 conditions must be evaluated with respect to how the worker's tumor affects the worker's ability to perform the job and an assessment of his life span.

Information concerning the potential impact of the malignancy on a worker's ability to perform a job is identified in the Functional Impact column in the table. All railroad occupations in the Tables are considered together. Functional impacts are classified as significant if the treatment or sequelae from treatment including radiotherapy, chemotherapy and/or surgery is likely to impair the worker from performing the job. If the treatment results in a significant impairment of another organ system, the individual should be evaluated for disability associated with impairment of that body part. For example, a person undergoing an amputation for a bone malignancy would have to be evaluated for an amputation of that body part. For many cancers, it is difficult to make generalizations regarding the level of impairment that will occur after the person has initiated or completed treatment. Nonsignificant impacts include those that are unlikely to have any effect on the individual's work capacity.

Cancer type	2-year[1]	5-year[1]	Disability status[2]	Functional impact[3]
Brain:				
Local		26	1	S
Regional		27.9	1	S
Distant		23.6	1	S
Female Breast:				
Regional		71.1	2	S
Distant		17.8	1	S
Colon:				
Local		91	2	S
Regional		60.1	2	S
Distant		6	1	S
Rectal:				
Local		84.5	2	S
Regional		50.7	2	S

Cancer type	2-year[1]	5-year[1]	Disability status[2]	Functional impact[3]
Distant		5.3	1	S
Esophagus:				
Local		18.5	1	S
Regional		5.2	1	S
Distant		1.8	1	S
Hodgkin's Disease:[4]				
Stage 1		90 - 95	3	S
Stage 2		86	2	S
Stage 3		<80	2	S
Stage 4		<80	1	S
Kidney/Renal Pelvis:				
Local		85.4	3	S
Regional		56.3	2	S
Distant		9	1	S
Larynx:				
Local		84.2	2	S
Regional		52.5	2	S
Distant		24	1	S
Acute Lymphocytic Leukemia:				
All		51.1	2	S
Chronic Lymphocytic Leukemia:				
All		66.2	2	S
Acute Myelogenous Leukemia:				
All		9.7	1	S
Chronic Myelogenous Leukemia:				
All		21.7	1	S
Liver/Intrahepatic Bile Duct:				
Local		15.1	1	S
Regional		5.8	1	S
Distant		1.9	1	S
Lung/Bronchus:[5]				
Local		45.6	2	S
Regional		13.1	1	S
Distant		1.3	1	S
Melanomas of Skin:				
Regional		53.6	2	S
Distant		12.8	1	S
Oral Cavity/Pharyngeal:				
Local		76.2	2	S
Regional		40.9	2	S
Distant		18.7	1	S
Pancreas:				
Local		6.1	1	S
Regional		3.7	1	S
Distant		1.4	1	S
Prostate:				
Local		91	3	S
Regional		80.4	2	S
Distant		28	1	S
Stomach:				
Local		55.4	1	S
Regional		17.3	1	S
Distant		2.1	1	S
Testicular:				
Distant		65.5	1	S
Thyroid:				
Regional		93.1	3	S
Distant		47.2	1	S
Bladder:				
Regional		46	2	S
Distant		9.1	1	S

[1]Source of 2 and 5 year survival data: Miller BA et al. Cancer Statistics Review 1973 - 1989. NIH Publication No. 92 - 2789.
[2]Disability Status:
Category 1: Significant impact on functional capacity or life span.
Category 2: Intermediate impact.
Category 3: No significant impact on functional capacity or life span.
[3]Functional Impacts:
(S) Significant -- significant potential for the effects of treatment (radiotheraphy, chemotherapy. surgery) to affect functional capacity.
[4]Hodgkin's disease data presented for each stage derived from American Cancer Society. American Cancer Society Textbook reference for unstaged cancer is derived from Cancer Statistics Review (See 3). In addition to other data, see: American Cancer Society Textbook of Clinical Oncology. Eds: Holleb AI, Fink DJ, Murphy GP, Atlanta: American Cancer Society, Inc. 1991.)
[5]Small cell carcinoma is classified as a 1.

B. Endocrine

Confirmatory test	Minimum result	Requirements
BODY PART: ENDOCRINE CONFIRMATORY TESTS		
Diabetes, requiring insulin (IDDM):		
Medical record review	Confirmation of condition and need for insulin use	Highly recommended.

Disability test	Test result	Disability classification
BODY PART: ENDOCRINE JOB TITLE: ENGINEER		
Diabetes, requiring insulin (IDDM):		
Medical record review	Confirmation of condition and need for insulin use	D

C. Cardiac

Confirmatory test	Minimum result	Requirements
BODY PART: CARDIAC CONFIRMATORY TESTS		
Angina:		
Medical record review	Confirmed history of ischemia including copies of electrocardiogram.	Recommended.
Stress test	Definite ischemia on exercise test	Recommended.
Thallium study	Definite ischemia with exercise	Recommended.
Aortic valve disease:		
Cardiac catheterization	Proven and significant	Recommended.
Echocardiogram	Significant valve disease	Recommended.
Coronary artery disease:		
Medical record review	Documented ischemia with electrocardiogram confirmation.	Recommended.
Medical record review	Documented myocardial infarction	Recommended.
Stress test	Positive	Recommended.
Thallium study	Definite ischemia with exercise	Recommended.
Angiography	Definite occlusion (>60%) of one vessel	Recommended.
Cardiomyopathy:		
Echocardiogram	Proven ejection fraction ≤35%	Recommended.
Catheterization	Poor global function and not coronary artery disease	Recommended.
Hypertension:		
Medical record review	Documentation of hypertension for one year	Highly recommended.
Medical record review	Definite diagnosis by cardiologist or internist	Highly recommended.
Medical record review	Confirmation of medication use	Highly recommended.
Arrhythmia: heart block:		
Medical record review	Proven episode with electrocardiogram confirmation	Recommended.
Electrocardiogram	Documentation of arrhythmia	Recommended.
Mitral valve disease:		
Cardiac catheterization	Significant valve disease	Recommended.
Echocardiogram	Significant valve disease	Recommended.
Pericardial disease:		
Medical record review	Confirmed by cardiologist or internist	Highly recommended.
Pulmonary hypertension:		
Physical examination	Increased pulmonic sound or pulmonary ejection murmur by cardiologist or internist.	Recommended.
Electrocardiogram	Definite right ventricular hypertension	Highly recommended.
Ventricular ectopy:		
Medical record review	Definite episode within one year	Recommended.
Holter monitoring	Definite arrhythmia	Recommended.
Provocative testing	Positive response	Recommended.
Arrhythmia: supraventricular tachycardia:		
Medical record review	Definite episode within one year	Recommended.
Holter monitoring	Definite arrhythmia	Recommended.
Post heart transplant:		
Medical record review	Documented	Highly recommended.

Disability test	Test result	Disability classification
BODY PART: CARDIAC JOB TITLE: TRAINMAN		
Angina:		
Echocardiogram	Poor ejection fraction ≤35%	D
Stress test	Peak exercise ≤7 METS	D
Medical record review	Unstable as diagnosed by cardiologist	D
Stress test	Documented hypotensive response	D
Stress test: significant ST changes	Definite ischemia ≤7 METS	D
Aortic valve disease:		
Cardiac catheterization	Aortic gradient 25 - 50 mm HG.	
Echocardiogram	Poor ejection fraction ≤35%	D
Stress test	Peak exercise ≤7 METS	D
Coronary artery disease:		
Myocardial infarction	Multiple infarctions	D
Echocardiogram	Confirmed ventricular aneurysm	D
Cardiac catheterization	Aortic gradient 25 - 50 mm Hg	D
Cardiac catheterization	Poor ejection fraction ≤35%	D
Stress test	Peak exercise ≤7 METS	D
Medical record review	Unstable as diagnosed by a Cardiologist	D
Stress test	Documented hypotensive response	D
Stress test	Definite ischemia ≤ 7 METS	D
Isotope, e.g., thallium study	Definite ischemia ≤ 7 METS	D
Cardiomyopathy:		
Cardiac catheterization	Poor ejection fraction ≤35%	D
Echocardiogram	Poor ejection fraction ≤35%	D
Stress test	Peak exercise ≤7 METS	D
Hypertension:		
Medical record review	Diastolic >120 and systolic >160, 50% of the time and evidence of end organ damage (blood creatinine >2; urinary protein >½ gm; or EKG evidence of ischemia).	D
Arrhythmia: heart block:		
Holter	Documented asystole length >1.5 - 2 seconds	D
Medical record review	Documented syncope with proven arrhythmia	D
Mitral valve disease:		
Cardiac catheterization	Mitral valve gradient ≥5 mm Hg	D
Cardiac catheterization	Mitral regurgitation severe	D
Cardiac catheterization	Poor ejection fraction ≤35%	D
Echocardiogram	Poor ejection fraction ≤35%	D
Stress test	Peak exercise ≤7 METS	D
Pericardial disease:		
Cardiac catheterization	Poor ejection fraction ≤35%	D
Echocardiogram	Poor ejection fraction ≤35%	D
Ventricular ectopy:		
Medical record review	Documented life threatening arrhythmia	D
Holter	Uncontrolled ventricular rhythm	D
Medical record review	Documented related syncope	D
Arrhythmia: supraventricular tachycardia:		
Medical record review	Documented related syncope	D
Post heart transplant:		
Medical record review	Post heart transplant	D
BODY PART: CARDIAC JOB TITLE: ENGINEER		
Angina:		
Echocardiogram	Poor ejection fraction ≤35%	D
Stress test	Peak exercise ≤5 METS	D
Medical record review	Unstable as diagnosed by cardiologist	D
Stress test	Documented hypotensive response	D
Stress test: significant ST changes	Definite ischemia ≤5 METS	D
Aortic valve disease:		
Cardiac catheterization	Aortic gradient 25 - 50 mm HG	D
Echocardiogram	Poor ejection fraction ≤35%	D
Stress test	Peak exercise ≤5 METS	D
Coronary artery disease:		
Myocardial infarction	Multiple infarctions	D
Echocardiogram	Confirmed ventricular aneurysm	D
Cardiac catheterization	Aortic gradient 25 - 50 mm Hg	D
Cardiac catheterization	Poor ejection fraction ≤35%	D
Stress test	Peak exercise ≤5 METS	D
Medical record review	Unstable as diagnosed by a Cardiologist	D
Stress test	Documented hypotensive response	D
Stress test	Definite ischemia ≤5 METS	D

Disability test	Test result	Disability classification
Isotope, e.g., thallium study	Definite ischemia ≤5 METS	D
Cardiomyopathy:		
Cardiac catheterization	Poor ejection fraction ≤35%	D
Echocardiogram	Poor ejection fraction ≤35%	D
Stress test	Peak exercise ≤5 METS	D
Hypertension:		
Medical record review	Diastolic >120 and systolic >160, 50% of the time and evidence of end organ damage (blood creatinine >2; urinary protein >½ gm; or EKG evidence of ischemia).	D
Arrhythmia: heart block:		
Holter	Documented asystole length >1.5 - 2 seconds	D
Medical record review	Documented syncope with proven arrhythmia	D
Mitral valve disease:		
Cardiac catheterization	Mitral valve gradient ≥10 mm Hg	D
Cardiac catheterization	Mitral regurgitation severe	D
Cardiac catheterization	Poor ejection fraction ≤35%	D
Echocardiogram	Poor ejection fraction ≤35%	D
Stress test	Peak exercise ≤5 METS	D
Pericardial disease:		
Cardiac catheterization	Poor ejection fraction ≤35%	D
Echocardiogram	Poor ejection fraction ≤35%	D
Ventricular ectopy:		
Medical record review	Documented life threatening arrhythmia	D
Holter	Uncontrolled ventricular rhythm	D
Medical record review	Documented related syncope	D
Arrhythmia: supraventricular tachycardia:		
Medical record review	Documented related syncope	D
Post heart transplant:		
Medical record review	Post heart transplant	D
BODY PART: CARDIAC JOB TITLE: DISPATCHER		
Angina:		
Echocardiogram	Poor ejection fraction ≤35%	D
Stress test	Peak exercise ≤5 METS	D
Medical record review	Unstable as diagnosed by cardiologist	D
Stress test	Documented hypotensive response	D
Stress test: significant ST changes	Definite ischemia ≤5 METS	D
Aortic valve disease:		
Cardiac catheterization	Aortic gradient 25 - 50 mm Hg	D
Echocardiogram	Poor ejection fraction ≤35%	D
Stress test	Peak exercise ≤5 METS	D
Coronary artery disease:		
Myocardial infarction	Multiple infarctions	D
Echocardiogram	Confirmed ventricular aneurysm	D
Cardiac catheterization	Aortic gradient 25 - 50 mm Hg	D
Cardiac catheterization	Poor ejection fraction ≤35%	D
Stress test	Peak exercise ≤5 METS	D
Medical record review	Unstable as diagnosed by cardiologist	D
Stress test	Documented hypotensive response	D
Stress test	Definite ischemia ≤5 METS	D
Isotope, e.g., thallium study	Definite ischemia ≤5 METS	D
Cardiomyopathy:		
Cardiac catheterization	Poor ejection fraction ≤35%	D
Echocardiogram	Poor ejection fraction ≤35%	D
Stress test	Peak exercise ≤5 METS	D
Hypertension:		
Medical record review	Diastolic >120 and systolic >160, 50% of the time and evidence of end organ damage (blood creatinine >2; urinary protein >½ gm; or EKG evidence of ischemia).	D
Arrhythmia: heart block:		
Holter	Documented asystole length >1.5 - 2 seconds	D
Medical record review	Documented syncope with proven arrhythmia	D
Mitral valve disease:		
Cardiac catheterization	Mitral valve gradient ≥10 mm Hg	D
Cardiac catheterization	Mitral regurgitation severe	D
Cardiac catheterization	Poor ejection fraction ≤35%	D
Echocardiogram	Poor ejection fraction ≤35%	D
Stress test	Peak exercise ≤5 METS	D
Pericardial disease:		
Cardiac catheterization	Poor ejection fraction ≤35%	D
Echocardiogram	Poor ejection fraction ≤35%	D
Ventricular ectopy:		
Medical record review	Documented life threatening arrhythmia	D

Disability test	Test result	Disability classification
Holter	Uncontrolled ventricular rhythm	D
Medical record review	Documented related syncope	D
Arrhythmia: supraventricular tachycardia:		
Medical record review	Documented related syncope	D
Post heart transplant:		
Medical record review	Post heart transplant	D
BODY PART: CARDIAC JOB TITLE: CARMAN		
Angina:		
Echocardiogram	Poor ejection fraction ≤35%	D
Stress test	Peak exercise ≤5 METS	D
Medical record review	Unstable as diagnosed by cardiologist	D
Stress test	Documented hypotensive response	D
Stress test: significant ST changes	Definite ischemia ≤5 METS	D
Aortic valve disease:		
Cardiac catheterization	Aortic gradient 25 - 50 mm HG.	
Echocardiogram	Poor ejection fraction ≤35%	D
Stress test	Peak exercise ≤5 METS	D
Coronary artery disease:		
Myocardial infarction	Multiple infarctions	D
Echocardiogram	Confirmed ventricular aneurysm	D
Cardiac catheterization	Aortic gradient 25 - 50 mm Hg	D
Cardiac catheterization	Poor ejection fraction ≤35%	D
Stress test	Peak exercise ≤5 METS	D
Medical record review	Unstable as diagnosed by a Cardiologist	D
Stress test	Documented hypotensive response	D
Stress test	Definite ischemia ≤ 5 METS	D
Isotope, e.g., thallium study	Definite ischemia ≤ 5 METS	D
Cardiomyopathy:		
Cardiac catheterization	Poor ejection fraction ≤35%	D
Echocardiogram	Poor ejection fraction ≤35%	D
Stress test	Peak exercise ≤5 METS	D
Hypertension:		
Medical record review	Diastolic >120 and systolic >160, 50% of the time and evidence of end organ damage (blood creatinine >2; urinary protein >½ gm; or EKG evidence of ischemia).	D
Arrhythmia: heart block:		
Holter	Documented asystole length >1.5 - 2 seconds	D
Medical record review	Documented syncope with proven arrhythmia	D
Mitral valve disease:		
Cardiac catheterization	Mitral valve gradient ≥10 mm Hg	D
Cardiac catheterization	Mitral regurgitation severe	D
Cardiac catheterization	Poor ejection fraction ≤35%	D
Echocardiogram	Poor ejection fraction ≤35%	D
Stress test	Peak exercise ≤5 METS	D
Pericardial disease:		
Cardiac catheterization	Poor ejection fraction ≤35%	D
Echocardiogram	Poor ejection fraction ≤35%	D
Ventricular ectopy:		
Medical record review	Documented life threatening arrhythmia	D
Holter	Uncontrolled ventricular rhythm	D
Medical record review	Documented related syncope	D
Arrhythmia: supraventricular tachycardia:		
Medical record review	Documented related syncope	D
Post heart transplant:		
Medical record review	Post heart transplant	D
BODY PART: CARDIAC JOB TITLE: SIGNALMAN		
Angina:		
Echocardiogram	Poor ejection fraction ≤35%	D
Stress test	Peak exercise ≤7 METS	D
Medical record review	Unstable as diagnosed by cardiologist	D
Stress test	Documented hypotensive response	D
Stress test: significant ST changes	Definite ischemia ≤7 METS	D
Aortic valve disease:		
Cardiac catheterization	Aortic gradient 25 - 50 mm HG	D
Echocardiogram	Poor ejection fraction ≤35%	D
Stress test	Peak exercise ≤7 METS	D
Coronary artery disease:		
Myocardial infarction	Multiple infractions	D

Disability test	Test result	Disability classification
Echocardiogram	Confirmed ventricular aneurysm	D
Cardiac catheterization	Aortic gradient 25 - 50 mm Hg	D
Cardiac catheterization	Poor ejection fraction ≤35%	D
Stress test	Peak exercise ≤7 METS	D
Medical record review	Unstable as diagnosed by cardiologist	D
Stress test	Documented hypotensive response	D
Stress test	Definite ischemia ≤7 METS	D
Isotope, e.g., thallium study	Definite ischemia ≤7 METS	D
Cardiomyopathy:		
Cardiac catheterization	Poor ejection fraction ≤35%	D
Echocardiogram	Poor ejection fraction ≤35%	D
Stress test	Peak exercise ≤7 METS	D
Hypertension:		
Medical record review	Diastolic >120 and systolic >160, 50% of the time and evidence of end organ damage (blood creatinine >2; urinary protein >½ gm; or EKG evidence of ischemia).	D
Arrhythmia: heart block		
Holter	Documented asystole length >1.5 - 2 seconds	D
Medical record review	Documented syncope with proven arrhythmia	D
Mitral valve disease:		
Cardiac catheterization	Mitral valve gradient ≥5 mm Hg	D
Cardiac catherization	Mitral regurgitation severe	D
Cardiac catheterization	Poor ejection fraction ≤35%	D
Echocardiogram	Poor ejection fraction ≤35%	D
Stress test	Peak exercise ≤7 METS	D
Pericardial disease:		
Cardiac catheterization	Poor ejection fraction ≤35%	D
Echocardiogram	Poor ejection fraction ≤35%	D
Ventricular ectopy:		
Medical record review	Documented life threatening arrhythmia	D
Holter	Uncontrolled ventricular rhythm	D
Medical record review	Documented related syncope	D
Arrhythmia: supraventricular tachycardia:		
Medical record review	Documented related syncope	D
Post heart transplant:		
Medical record review	Post heart transplant	D
BODY PART: CARDIAC JOB TITLE: TRACKMAN		
Angina:		
Echocardiogram	Poor ejection fraction ≤35%	D
Stress test	Peak exercise ≤7 METS	D
Medical record review	Unstable as diagnosed by cardiologist	D
Stress test	Documented hypotensive response	D
Stress test: significant ST changes	Definite ischemia ≤7 METS	D
Aortic valve disease:		
Cardiac catheterization	Aortic gradient 25 - 50 mm HG	D
Echocardiogram	Poor ejection fraction ≤35%	D
Stress test	Peak exercise ≤7 METS	D
Coronary artery disease:		
Myocardial infarction	Multiple infarctions	D
Echocardiogram	Confirmed ventricular aneurysm	D
Cardiac catheterization	Aortic gradient 25 - 50 mm Hg	D
Cardiac catheterization	Poor ejection fraction ≤35%	D
Stress test	Peak exercise ≤7 METS	D
Medical record review	Unstable as diagnosed by a cardiologist	D
Stress test	Documented hypotensive response	D
Stress test	Definite ischemia ≤7 METS	D
Isotope, e.g., thallium study	Definite ischemia ≤7 METS	D
Cardiomyopathy:		
Cardiac catheterization	Poor ejection fraction ≤35%	D
Echocardiogram	Poor ejection fraction ≤35%	D
Stress test	Peak exercise ≤7 METS	D
Hypertension:		
Medical record review	Diastolic >120 and systolic >160, 50% of the time and evidence of end organ damage (blood creatinine >2; urinary protein >½ gm; or EKG evidence of ischemia).	D
Arrhythmia: heart block:		
Holter	Documented asystole length >1.5 - 2 seconds	D
Medical record review	Documented syncope with proven arrhythmia	D
Mitral valve disease:		
Cardiac catheterization	Mitral valve gradient ≥5 mm Hg	D
Cardiac catheterization	Mitral regurgitation severe	D

Disability test	Test result	Disability classification
Cardiac catheterization	Poor ejection fraction ≤35%	D
Echocardiogram	Poor ejection fraction ≤35%	D
Stress test	Peak exercise ≤7 METS	D
Pericardial disease:		
Cardiac catheterization	Poor ejection fraction ≤35%	D
Echocardiogram	Poor ejection fraction ≤35%	D
Ventricular ectopy:		
Medical record review	Documented life threatening arrhythmia	D
Holter	Uncontrolled ventricular rhythm	D
Medical record review	Documented related syncope	D
Arrhythmia: supraventricular tachycardia:		
Medical record review	Documented related syncope	D
Post heart transplant:		
Medical record review	Post heart transplant	D
BODY PART: CARDIAC JOB TITLE: MACHINIST		
Angina:		
Echocardiogram	Poor ejection fraction ≤35%	D
Stress test	Peak exercise ≤5 METS	D
Medical record review	Unstable as diagnosed by cardiologist	D
Stress test	Documented hypotensive response	D
Stress test: significant ST changes	Definite ischemia ≤5 METS	D
Aortic valve disease:		
Cardiac catheterization	Aortic gradient 25 - 50 mm HG.	
Echocardiogram	Poor ejection fraction ≤35%	D
Stress test	Peak exercise ≤5 METS	D
Coronary artery disease:		
Myocardial infarction	Multiple infarctions	D
Echocardiogram	Confirmed ventricular aneurysm	D
Cardiac catheterization	Aortic gradient 25 - 50 mm Hg	D
Cardiac catheterization	Poor ejection fraction ≤35%	D
Stress test	Peak exercise ≤5 METS	D
Medical record review	Unstable as diagnosed by a cardiologist	D
Stress test	Documented hypotensive response	D
Stress test	Definite ischemia ≤5 METS	D
Isotope, e.g., thallium study	Definite ischemia ≤5 METS	D
Cardiomyopathy:		
Cardiac catheterization	Poor ejection fraction ≤35%	D
Echocardiogram	Poor ejection fraction ≤35%	D
Stress test	Peak exercise ≤5 METS	D
Hypertension:		
Medical record review	Diastolic >120 and systolic >160, 50% of the time and evidence of end organ damage (blood creatinine >2; urinary protein >½ gm; or EKG evidence of ischemia).	D
Arrhythmia: heart block:		
Holter	Documented asystole length >1.5 - 2 seconds	D
Medical record review	Documented syncope with proven arrhythmia	D
Mitral valve disease:		
Cardiac catheterization	Mitral valve gradient ≥10 mm Hg	D
Cardiac catheterization	Mitral regurgitation severe	D
Cardiac catheterization	Poor ejection fraction ≤35%	D
Echocardiogram	Poor ejection fraction ≤35%	D
Stress test	Peak exercise ≤5 METS	D
Pericardial disease:		
Cardiac catheterization	Poor ejection fraction ≤35%	D
Echocardiogram	Poor ejection fraction ≤35%	D
Ventricular ectopy:		
Medical record review	Documented life threatening arrhythmia	D
Holter	Uncontrolled ventricular rhythm	D
Medical record review	Documented related syncope	D
Arrhythmia: supraventricular tachycardia:		
Medical record review	Documented related syncope	D
Post heart transplant:		
Medical record review	Post heart transplant	D
BODY PART: CARDIAC JOB TITLE: SHOP LABORER		
Angina:		
Echocardiogram	Poor ejection fraction ≤35%	D
Stress test	Peak exercise ≤5 METS	D
Medical record review	Unstable as diagnosed by cardiologist	D

Disability test	Test result	Disability classification
Stress test	Documented hypotensive response	D
Stress test: significant ST changes	Definite ischemia ≤5 METS	D
Aortic valve disease:		
Cardiac catheterization	Aortic gradient 25 - 50 mm HG.	
Echocardiogram	Poor ejection fraction ≤35%	D
Stress test	Peak exercise ≤5 METS	D
Coronary artery disease:		
Myocardial infarction	Multiple infarctions	D
Echocardiogram	Confirmed ventricular aneurysm	D
Cardiac catheterization	Aortic gradient 25 - 50 mm Hg.	
Cardiac catheterization	Poor ejection fraction ≤35%	D
Stress test	Peak exercise ≤5 METS	D
Medical record review	Unstable as diagnosed by a Cardiologist	D
Stress test	Documented hypotensive response	D
Stress test	Definite ischemia ≤5 METS	D
Isotope, e.g., thallium study	Definite ischemia ≤5 METS	D
Cardiomyopathy:		
Cardiac catheterization	Poor ejection fraction ≤35%	D
Echocardiogram	Poor ejection fraction ≤35%	D
Stress test	Peak exercise ≤5 METS	D
Hypertension:		
Medical record review	Diastolic >120 and systolic >160, 50% of the time and evidence of end organ damage (blood creatinine >2; urinary protein >½ gm; or EKG evidence of ischemia).	D
Arrhythmia: heart block:		
Holter	Documented asystole length >1.5 - 2 seconds	D
Medical record review	Documented syncope with proven arrhythmia	D
Mitral valve disease:		
Cardiac catheterization	Mitral valve gradient ≥10 mm Hg	D
Cardiac catheterization	Mitral regurgitation severe	D
Cardiac catheterization	Poor ejection fraction ≤35%	D
Echocardiogram	Poor ejection fraction ≤35%	D
Stress test	Peak exercise ≤5 METS	D
Pericardial disease:		
Cardiac catheterization	Poor ejection fraction ≤35%	D
Echocardiogram	Poor ejection fraction ≤35%	D
Ventricular ectopy:		
Medical record review	Documented life threatening arrhythmia	D
Holter	Uncontrolled ventricular rhythm	D
Medical record review	Documented related syncope	D
Arrhythmia: supraventricular tachycardia:		
Medical record review	Documented related syncope	D
Post heart transplant:		
Medical record review	Post heart transplant	D

BODY PART: CARDIAC
JOB TITLE: SALES REPRESENTATIVE

Angina:		
Echocardiogram	Poor ejection fraction ≤35%	D
Stress test	Peak exercise ≤5 METS	D
Medical record review	Unstable as diagnosed by cardiologist	D
Stress test	Documented hypotensive response	D
Stress test: significant ST changes	Definite ischemia ≤5 METS	D
Aortic valve disease:		
Cardiac catheterization	Aortic gradient 25 - 50 mm HG	D
Echocardiogram	Poor ejection fraction ≤35%	D
Stress test	Peak exercise ≤5 METS	D
Coronary artery disease:		
Myocardial infarction	Multiple infarctions	D
Echocardiogram	Confirmed ventricular aneurysm	D
Cardiac catheterization	Aortic gradient 25 - 50 mm Hg	D
Cardiac catheterization	Poor ejection fraction ≤35%	D
Stress test	Peak exercise ≤5 METS	D
Medical record review	Unstable as diagnosed by a cardiologist	D
Stress test	Documented hypotensive response	D
Stress test	Definite ischemia ≤5 METS	D
Isotope, e.g., thallium study	Definite ischemia ≤5 METS	D
Cardiomyopathy:		
Cardiac catheterization	Poor ejection fraction ≤35%	D
Echocardiogram	Poor ejection fraction ≤35%	D
Stress test	Peak exercise ≤5 METS	D

Disability test	Test result	Disability classification
Hypertension:		
Medical record review	Diastolic >120 and systolic >160, 50% of the time and evidence of end organ damage (blood creatinine >2; urinary protein >½ gm; or EKG evidence of ischemia).	D
Arrhythmia: heart block:		
Holter	Documented asystole length >1.5 - 2 seconds	D
Medical record review	Documented syncope with proven arrhythmia	D
Mitral valve disease:		
Cardiac catheterization	Mitral valve gradient ≥10 mm Hg	D
Cardiac catheterization	Mitral regurgitation severe	D
Cardiac catheterization	Poor ejection fraction ≤35%	D
Echocardiogram	Poor ejection fraction ≤35%	D
Stress test	Peak exercise ≤5 METS	D
Pericardial disease:		
Cardiac catheterization	Poor ejection fraction ≤35%	D
Echocardiogram	Poor ejection fraction ≤35%	D
Ventricular ectopy:		
Medical record review	Documented life threatening arrhythmia	D
Holter	Uncontrolled ventricular rhythm	D
Medical record review	Documented related syncope	D
Arrhythmia: supraventricular tachycardia:		
Medical record review	Documented related syncope	D
Post heart transplant:		
Medical record review	Post heart transplant	D

BODY PART: CARDIAC
JOB TITLE: GENERAL OFFICE CLERK

Angina:		
Echocardiogram	Poor ejection fraction ≤35%	D
Stress test	Peak exercise ≤5 METS	D
Medical record review	Unstable as diagnosed by cardiologist	D
Stress test	Documented hypotensive response	D
Stress test: significant ST changes	Definite ischemia ≤5 METS	D
Aortic valve disease:		
Cardiac catheterization	Aortic gradient 25 - 50 mm HG	D
Echocardiogram	Poor ejection fraction ≤35%	D
Stress test	Peak exercise ≤5 METS	D
Coronary artery disease:		
Myocardial infarction	Multiple infarctions	D
Echocardiogram	Confirmed ventricular aneurysm	D
Cardiac catheterization	Aortic gradient 25 - 50 mm Hg	D
Cardiac catheterization	Poor ejection fraction ≤35%	D
Stress test	Peak exercise ≤5 METS	D
Medical record review	Unstable as diagnosed by a Cardiologist	D
Stress test	Documented hypotensive response	D
Stress test	Definite ischemia ≤5 METS	D
Isotope, e.g., thallium study	Definite ischemia ≤5 METS	D
Cardiomyopathy:		
Cardiac catheterization	Poor ejection fraction ≤35%	D
Echocardiogram	Poor ejection fraction ≤35%	D
Stress test	Peak exercise ≤5 METS	D
Arrhythmia: heart block:		
Holter	Documented asystole length >1.5 - 2 seconds	D
Medical record review	Documented syncope with proven arrhythmia	D
Mitral valve disease:		
Cardiac catheterization	Mitral valve gradient ≥10 mm Hg	D
Cardiac catheterization	Mitral regurgitation severe	D
Cardiac catheterization	Poor ejection fraction ≤35%	D
Echocardiogram	Poor ejection fraction ≤35%	D
Stress test	Peak exercise ≤5 METS	D
Pericardial disease:		
Cardiac catheterization	Poor ejection fraction ≤35%	D
Echocardiogram	Poor ejection fraction ≤35%	D
Ventricular ectopy:		
Medical record review	Documented life threatening arrhythmia	D
Holter	Uncontrolled ventricular rhythm	D
Medical record review	Documented related syncope	D
Arrhythmia: supraventricular tachycardia:		
Medical record review	Documented related syncope	D
Post heart transplant:		
Medical record review	Post heart transplant	D

D. Respiratory

Confirmatory test	Minimum result	Requirements
BODY PART: RESPIRATORY CONFIRMATORY TESTS		
Asthma:		
Spirometry	FEV1/FVC ratio diminished	Recommended.
Spirometry	>15% change with administration of bronchodilator	Recommended.
Methacholine challenge test	Positive: FEV1 decrease >20% at (PC <=8 mg/ml)	Recommended
Bronchiectasis:		
Medical record review	Chronic cough and sputum	Recommended.
Chest X-ray	Bronchiectasis demonstrated	Recommended.
Chest CAT scan	Bronchiectasis demonstrated	Recommended.
Chronic bronchitis:		
Medical record review	Frequent cough -- 2 years duration	Highly recommended.
Chronic obstructive pulmonary disease:		
Spirometry	FEV1/FVC ratio below 65% when stable	Highly recommended.
Spirometry	FEV1 below 75% of predicted when stable	Highly recommended.
Cor pulmonale:		
Electrocardiogram	Definite right ventricular hypertrophy	Recommended.
Echocardiogram	Definite right ventricular hypertrophy	Recommended.
Pulmonary fibrosis:		
Lung biopsy	Diffuse fibrosis	Recommended.
Chest CAT scan	More than minimal fibrosis	Recommended.
Lung resection:		
Medical record review	At least one lobe resected	Highly recommended.
Pneumothorax:		
Medical record review	Required hospitalization with chest tube drainage	Highly recommended.
Restrictive lung disease:		
Chest X-ray	Restrictive lung changes	Recommended.
DLCO	Abnormal	Highly recommended.
Chest CAT scan	Restrictive lung changes	Recommended.
Spirometry	FVC <75% predicted	Highly recommended.
Silicosis:		
Medical record review	Occupational exposure for at least 1 year	Highly recommended.
Tuberculosis:		
Chest X-ray	Evidence of changes consistent with tuberculosis infection.	Recommended.
Culture	Positive	Recommended.

Disability test	Test result	Disability classification
BODY PART: RESPIRATORY JOB TITLE: TRAINMAN		
Asthma:		
Spirometry	Repeated spirometry FEV1 <40% over a 12 month period.	
Bronchiectasis:		
Resting ABG	PCO2 arterial >50 mm Hg if stable	D
Pulmonary exercise test or exercise ABG	PO2 drop >5 torr at maximum exercise	D
Pulmonary exercise test	Maximum VO2 <15 ml/kg	D
Electrocardiogram	Definite positive right ventricular hypertrophy	D
Chronic bronchitis:		
Spirometry	Repeated spirometry FEV1 <40% over a 12 month period.	D
Resting ABG	PCO2 arterial >50 mm Hg if stable	D
Pulmonary exercise test or exercise ABG	PO2 drop >5 torr at maximum exercise	D
Pulmonary exercise test	Maximum VO2 <15 ml/kg	D
Electrocardiogram	Definite positive right ventricular hypertrophy	D
Chronic obstructive pulmonary disease (COPD):		
Resting ABG	PCO2 arterial >50 mm Hg if stable	D
Pulmonary exercise test or exercise ABG	PO2 drop >5 torr at maximum exercise	D
Pulmonary exercise test	Maximum VO2 <15 ml/kg	D
Electrocardiogram	Definite positive right ventricular hypertrophy	D
Cor pulmonale:		
Electrocardiogram	Definite positive right ventricular hypertrophy	D
Pulmonary fibrosis:		
Resting ABG	PCO2 arterial >50 mm Hg if stable	D
Electrocardiogram	Definite positive right ventricular hypertrophy	D
DLCO	<45% predicted	D

Disability test	Test result	Disability classification
Pulmonary exercise test or exercise ABG	PO2 drop >5 torr at maximum exercise	D
Pulmonary exercise test	Maximum VO2 <15 ml/kg	D
Spirometry	FVC <50% predicted	D
Lung resection:		
Electrocardiogram	Definite positive right ventricular hypertrophy	D
Restrictive lung disease:		
DLCO	<45% predicted	D
Pulmonary exercise test or exercise ABG	PO2 drop >5 torr at maximum exercise	D
Pulmonary exercise test	Maximum VO2 <15 ml/kg	D
Spirometry	FVC <50% predicted	D
Electrocardiogram	Definite positive right ventricular hypertrophy	D
Silicosis:		
Resting ABG	PCO2 arterial >50 mm Hg If stable	D
Electrocardiogram	Definite positive right ventricular hypertrophy	D
BODY PART: RESPIRATORY JOB TITLE: CARMAN		
Asthma:		
Spirometry	Repeated spirometry FEV1 <40% over a 12 month period.	D
Bronchiectasis:		
Resting ABG	PCO2 arterial >50 mm Hg if stable	D
Pulmonary exercise test or exercise ABG	PO2 drop >5 torr at maximum exercise	D
Pulmonary exercise test	Maximum VO2 <15 ml/kg	D
Electrocardiogram	Definite positive right ventricular hypertrophy	D
Chronic bronchitis:		
Spirometry	Repeated spirometry FEV1 <40% over a 12 month period.	D
Resting ABG	PCO2 arterial >50 mm Hg if stable	D
Pulmonary exercise test or exercise ABG	PO2 drop >5 torr at maximum exercise	D
Pulmonary exercise test	Maximum VO2 <15 ml/kg	D
Electrocardiogram	Definite positive right ventricular hypertrophy	D
Chronic obstructive pulmonary disease (COPD):		
Resting ABG	PCO2 arterial >50 mm Hg if stable	D
Pulmonary exercise test or exercise ABG	PO2 drop >5 torr at maximum exercise	D
Pulmonary exercise test	Maximum VO2 <15 ml/kg	D
Electrocardiogram	Definite positive right ventricular hypertrophy	D
Cor pulmonale:		
Electrocardiogram	Definite positive right ventricular hypertrophy	D
Pulmonary fibrosis:		
Resting ABG	PCO2 arterial >50 mm Hg if stable	D
Electrocardiogram	Definite positive right ventricular hypertrophy	D
DLCO	<45% predicted	D
Pulmonary exercise test or exercise ABG	PO2 drop >5 torr at maximum exercise	D
Pulmonary exercise test	Maximum VO2 <15 ml/kg	D
Spirometry	FVC <50% predicted	D
Lung resection:		
Electrocardiogram	Definite positive right ventricular hypertrophy	D
Restrictive lung disease:		
DLCO	<45% predicted	D
Pulmonary exercise test or exercise ABG	PO2 drop >5 torr at maximum exercise	D
Pulmonary exercise test	Maximum VO2 <15 ml/kg	D
Spirometry	FVC <50% predicted	D
Electrocardiogram	Definite positive right ventricular hypertrophy	D
Silicosis:		
Resting ABG	PCO2 arterial >50 mm Hg if stable	D
Electrocardiogram	Definite positive right ventricular hypertrophy	D
BODY PART: RESPIRATORY JOB TITLE: SIGNALMAN		
Asthma:		
Spirometry	Repeated spirometry FEV1 <40% over a 12 month period.	D
Bronchiectasis:		
Resting ABG	PCO2 arterial >50 mm Hg if stable	D
Pulmonary exercise test or exercise ABG	PO2 drop >5 torr at maximum exercise	D
Pulmonary exercise test	Maximum VO2 <15 ml/kg	D
Electrocardiogram	Definite positive right ventricular hypertrophy	D
Chronic bronchitis:		
Spirometry	Repeated spirometry FEV1 <40% over a 12 month period.	D

Disability test	Test result	Disability classification
Resting ABG	PCO2 arterial >50 mm Hg if stable	D
Pulmonary exercise test or exercise ABG	PO2 drop >5 torr at maximum exercise	D
Pulmonary exercise test	Maximum VO2 <15 ml/kg	D
Electrocardiogram	Definite positive right ventricular hypertrophy	D
Chronic obstructive pulmonary disease (COPD):		
Resting ABG	PCO2 arterial >50 mm Hg if stable	D
Pulmonary exercise test or exercise ABG	PO2 drop >5 torr at maximum exercise	D
Pulmonary exercise test	Maximum VO2 <15 ml/kg	D
Electrocardiogram	Definite positive right ventricular hypertrophy	D
Cor pulmonale:		
Electrocardiogram	Definite positive right ventricular hypertrophy	D
Pulmonary fibrosis:		
Resting ABG	PCO2 arterial >50 mm Hg if stable	D
DLCO	<45% predicted	D
Pulmonary exercise test or exercise ABG	PO2 drop >5 torr at maximum exercise	D
Pulmonary exercise test	Maximum VO2 <15 ml/kg	D
Spirometry	FVC <50% predicted	D
Electrocardiogram	Definite positive right ventricular hypertrophy	D
Lung resection:		
Electrocardiogram	Definite positive right ventricular hypertrophy	D
Restrictive lung disease:		
DLCO	<45% predicted	D
Pulmonary exercise test or exercise ABG	PO2 drop >5 torr at maximum exercise	D
Pulmonary exercise test	Maximum VO2 <15 ml/kg	D
Spirometry	FVC <50% predicted	D
Electrocardiogram	Definite positive right ventricular hypertrophy	D
Silicosis:		
Resting AGB	PCO2 arterial >50 mm Hg if stable	D
Electrocardiogram	Definite positive right ventricular hypertrophy	D
BODY PART: RESPIRATORY JOB TITLE: TRACKMAN		
Asthma:		
Spirometry	Repeated spirometry FEV1 <40% over a 12 month period.	D
Bronchiectasis:		
Resting ABG	PCO2 arterial >50 mm Hg if stable	D
Pulmonary exercise test or exercise ABG	PO2 >5 torr at maximum exercise	D
Pulmonary exercise test	Maximum VO2 <15 ml/kg	D
Electrocardiogram	Definite positive right ventricular hypertrophy	D
Chronic bronchitis:		
Spirometry	Repeated spirometry FEV1 <40% over a 12 month period.	D
Resting ABG	PCO2 arterial >50 mm Hg if stable	D
Pulmonary exercise test or exercise ABG	PO2 drop >5 torr at maximum exercise	D
Pulmonary exercise test	Maximum VO2 <15 ml/kg	D
Electrocardiogram	Definite positive right ventricular hypertrophy	D
Chronic obstructive pulmonary disease (COPD):		
Resting ABG	PCO2 arterial >50 mm Hg if stable	D
Pulmonary exercise test or exercise ABG	PO2 drop >5 torr at maximum exercise	D
Pulmonary exercise test	Maximum VO2 <15 ml/kg	D
Electrocardiogram	Definite positive right ventricular hypertrophy	D
Cor pulmonale:		
Electrocardiogram	Definite positive right ventricular hypertrophy	D
Pulmonary fibrosis:		
Resting ABG	PCO2 arterial >50 mm Hg if stable	D
Electrocardiogram	Definite positive right ventricular hypertrophy	D
DLCO	<45% predicted	D
Pulmonary exercise test or exercise ABG	PO2 drop >5 torr at maximum exercise	D
Pulmonary exercise test	Maximum VO2 <15 ml/kg	D
Spirometry	FVC <50% predicted	D
Lung resection:		
Electrocardiogram	Definite positive right ventricular hypertrophy	D
Restrictive lung disease:		
DLCO	<45% predicted	D
Pulmonary exercise test or exercise ABG	PO2 drop >5 torr at maximum exercise	D
Pulmonary exercise test	Maximum VO2 <15 ml/kg	D
Spirometry	FVC <50% predicted	D
Electrocardiogram	Definite positive right ventricular hypertrophy	D
Silicosis:		
Resting ABG	PCO2 arterial >50 mm Hg if stable	D

Disability test	Test result	Disability classification
Electrocardiogram	Definite positive right ventricular hypertrophy	D
BODY PART: RESPIRATORY JOB TITLE: MACHINIST		
Asthma:		
Spirometry	Repeated spirometry FEV1 <40% over a 12 month period.	D
Bronchiectasis:		
Resting ABG	PCO2 arterial >50 mm Hg if stable	D
Pulmonary exercise test or exercise ABG	PO2 drop >5 torr at maximum exercise	D
Pulmonary exercise test	Maximum VO2 <15 ml/kg	D
Electrocardiogram	Definite positive right ventricular hypertrophy	D
Chronic bronchitis:		
Spirometry	Repeated spirometry FEV1 <40% over a 12 month period.	D
Resting AGB	PCO2 arterial >50 mm Hg if stable	D
Pulmonary exercise test or exercise ABG	PO2 drop >5 torr at maximum exercise	D
Pulmonary exercise test	Maximum VO2 <15 ml/kg	D
Electrocardiogram	Definite positive right ventricular hypertrophy	D
Chronic obstructive pulmonary disease (COPD):		
Resting ABG	PCO2 arterial >50 mm Hg if stable	D
Pulmonary exercise test or exercise ABG	PO2 drop >5 torr at maximum exercise	D
Pulmonary exercise test	Maximum VO2 <15 ml/kg	D
Electrocardiogram	Definite positive right ventricular hypertrophy	D
Cor pulmonale:		
Electrocardiogram	Definite positive right ventricular hypertrophy	D
Pulmonary fibrosis:		
Resting ABG	PCO2 arterial >50 mm Hg if stable	D
Electrocardiogram	Definite positive right ventricular hypertrophy	D
DLCO	<45% predicted	D
Pulmonary exercise test or exercise ABG	PO2 drop >5 torr at maximum exercise	D
Pulmonary exercise test	Maximum VO2 <15 ml/kg	D
Spirometry	FVC <50% predicted	D
Lung resection:		
Electrocardiogram	Definite positive right ventricular hypertrophy	D
Restrictive lung disease:		
DLCO	<45% predicted	D
Pulmonary exercise test or exercise ABG	PO2 drop >5 torr at maximum exercise	D
Pulmonary exercise test	Maximum VO2 <15 ml/kg	D
Spirometry	FVC <50% predicted	D
Electrocardiogram	Definite positive right ventricular hypertrophy	D
Silicosis:		
Resting ABG	PCO2 arterial >50 mm Hg if stable	D
Electrocardiogram	Definite positive right ventricular hypertrophy	D
BODY PART: RESPIRATORY JOB TITLE: SHOP LABORER		
Asthma:		
Spirometry	Repeated spirometry FEV1 <40% over a 12 month period.	D
Bronchiectasis:		
Resting ABG	PCO2 arterial >50 mm Hg if stable	D
Pulmonary exercise test or exercise ABG	PO2 drop >5 torr at maximum exercise	D
Pulmonary exercise test	Maximum VO2 <15 ml/kg	D
Electrocardiogram	Definite positive right ventricular hypertrophy	D
Chronic bronchitis:		
Spirometry	Repeated spirometry FEV1 <40% over a 12 month period.	D
Resting ABG	PCO2 arterial >50 mm Hg if stable	D
Pulmonary exercise test or exercise ABG	PO2 drop >5 torr at maximum exercise	D
Pulmonary exercise test	Maximum VO2 <15 ml/kg	D
Electrocardiogram	Definite positive right ventricular hypertrophy	D
Chronic obstructive pulmonary disease (COPD):		
Resting ABG	PCO2 arterial >50 mm Hg if stable	D
Pulmonary exercise test or exercise ABG	PO2 drop >5 torr at maximum exercise	D
Pulmonary exercise test	Maximum VO2 <15 ml/kg	D
Electrocardiogram	Definite positive right ventricular hypertrophy	D
Cor pulmonale:		
Electrocardiogram	Definite positive right ventricular hypertrophy	D
Pulmonary fibrosis:		
Resting ABG	PCO2 arterial >50 mm Hg if stable	D

Disability test	Test result	Disability classification
DLCO	<45% predicted	D
Pulmonary exercise test or exercise ABG	PO2 drop >5 torr at maximum exercise	D
Pulmonary exercise test	Maximum VO2 <15 ml/kg	D
Spirometry	FVC <50% predicted	D
Electrocardiogram	Definite positive right ventricular hypertrophy	D
Lung resection:		
Electrocardiogram	Definite positive right ventricular hypertrophy	D
Restrictive lung disease:		
DLCO	<45% predicted	D
Pulmonary exercise test or exercise ABG	PO2 drop >5 torr at maximum exercise	D
Pulmonary exercise test	Maximum VO2 <15 ml/kg	D
Spirometry	FVC <50% predicted	D
Electrocardiogram	Definite positive right ventricular hypertrophy	D
Silicosis:		
Resting ABG	PCO2 arterial >50 mm Hg if stable	D
Electrocardiogram	Definite positive right ventricular hypertrophy	D

E. Lumbar Sacral Spine

Confirmatory test	Minimum result	Requirements
BODY PART: LS SPINE CONFIRMATORY TESTS		
Ankylosing spondylitis:		
X-ray-lumbar sacral spine	Sacroilitis	Highly recommended.
HLA B27 (blood test)	Positive HLA B27 (90% case)	Recommended.
Backache, unspecified:		
Medical record review	History of back pain under medical treatment for at least 1 year.	Highly recommended.
Medical record review	History of back pain unresponsive to therapy for at least 1 year.	Highly recommended.
Medical record review	History of back pain with functional limitations for at least 1 year.	Highly recommended.
Chronic back pain, not otherwise specified:.		
Medical record review	History of back pain under medical treatment for at least 1 year.	Highly recommended.
Medical record review	History of back pain unresponsive to therapy for at least 1 year.	Highly recommended.
Medical record review	History of back pain with functional limitations for at least 1 year.	Highly recommended.
Cauda equina syndrome with bowel or bladder dysfunction:.		
Magnetic resonance imaging	Neural impingement of spinal nerves below L1	Recommended.
Computerized tomography	Neural impingement of spinal nerves below L1	Recommended.
Cystometrogram	Impaired bladder function	Recommended.
Rectal examination	Diminished rectal sphincter tone	Recommended.
Myelogram	Neural impingement of spinal nerves below L1	Recommended.
Degeneration of lumbar disc:		
X-ray lumbar sacral spine	Significant degenerative disc changes	Recommended.
Computerized tomography	Significant degenerative disc changes	Recommended.
Magnetic resonance imaging	Significant degenerative disc changes	Recommended.
Myelogram	Significant degenerative disc changes	Recommended.
Displacement of lumbar disc:.		
X-ray-lumbar sacral spine	Significant degenerative disc changes	Recommended.
Computerized tomography	Significant degenerative disc changes	Recommended.
Magnetic resonance imaging	Significant degenerative disc changes	Recommended.
Myelogram	Significant degenerative disc changes	Recommended.
Fracture: vertebral body:.		
Magnetic resonance imaging	Fracture vertebral body	Recommended.
Computerized tomography	Fracture vertebral body	Recommended.
X-ray-lumbar sacral spine	Fracture vertebral body	ommended.
Fracture: posterior element with spinal canal displacement:		
Magnetic resonance imaging	Fracture posterior spinal element with displacement of spinal canal.	Recommended.
Computerized tomography	Fracture posterior spinal element with displacement of spinal canal.	Recommended.
X-ray-lumbar sacral spine	Fracture posterior spinal element with displacement of spinal canal.	Recommended.

E. Lumbar Sacral Spine—Continued

Confirmatory test	Minimum result	Requirements
Fracture: posterior spinal element with no displacement:.		
X-ray-lumbar sacral spine	Fracture posterior spinal element	Recommended.
Magnetic resonance imaging	Fracture posterior spinal element	Recommended.
Computerized tomography	Fracture posterior spinal element	Recommended.
Fracture: spinous process:		
X-ray-lumbar sacral spine	Spinous process fracture	Recommended.
Magnetic resonance imaging	Spinous process fracture	Recommended.
Computerized tomography	Spinous process fracture	Recommended.
Fracture: Transverse process:		
Lumbar sacral spine	Transverse process fracture	Recommended.
Magnetic resonance imaging	Transverse process fracture	Recommended.
Computerized tomography	Transverse process fracture	Recommended.
Intervertebral disc disorder:		
X-ray-lumbar sacral spine	Significant disc degeneration	Recommended.
Magnetic resonance imaging	Significant disc degeneration	Recommended.
Computerized tomography	Significant disc degeneration	Recommended.
Myelogram	Significant disc degeneration	Recommended.
Lumbago:		
Medical record review: lumbar	History of back pain under medical treatment for at least 1 year.	Highly recommended.
Medical record review: lumbar	History of back pain unresponsive to therapy for at least 1 year.	Highly recommended.
Medical record review: lumbar	History of back pain with functional limitations for at least 1 year.	Highly recommended.
Lumbosacral neuritis:		
Magnetic resonance imaging	Evidence of neural compression	Recommended.
Electromyography	Definite denervation	Recommended.
Nerve conduction velocity	Definite slowing	Recommended.
Physical examination -- atrophy	Atrophy in affected limb with 2 cm difference between limbs.	Recommended.
Physical examination: straight leg raise	Positive straight leg raise	Recommended.
Sensory examination	Loss of sensation in affected dermatomes	Recommended.
Medical history	History of radicular pain	Highly recommended.
Computerized tomography	Evidence of neural compression	Recommended.
Lumbar spinal stenosis:		
Computerized tomography	Significant narrowing: spinal cord canal or intervertebral foramen.	Recommended.
Magnetic resonance imaging	Significant narrowing: spinal cord canal or intervertebral foramen.	Recommended.
Myelogram	Significant narrowing: spinal cord canal or intervertebral foramen.	Recommended.
Mechanical complication of internal orthopedic device:		
Medical record review	Documentation of failure of implant following surgical procedure.	Highly recommended.
Osteomalacia:		
X-ray-lumbar sacral spine	Evidence of significant osteomalacia	Recommended.
Magnetic resonance imaging	Evidence of significant osteomalacia	Recommended.
Computerized tomography	Evidence of significant osteomalacia	Recommended.
Osteomyelitis, chronic-lumbar:		
X-ray-lumbar sacral spine	Evidence of chronic infection	Recommended.
Magnetic resonance imaging	Evidence of chronic infection	Recommended.
Computerized tomography	Evidence of chronic infection	Recommended.
Osteoporosis:		
Computerized tomography	Significant bone density loss	Recommended.
Dual photon absorptiometry	Significant bone density loss	Recommended.
X-ray-lumbar sacral spine	Significant bone density loss	Recommended.
Post laminectomy syndrome with radiculopathy:		
Medical record review: lumbar	Documented surgical history of laminectomy	Highly recommended.
Magnetic resonance imaging	Evidence of laminectomy	Recommended.
Electromyography	Definite denervation	Recommended.
Nerve conduction velocity	Definite slowing	Recommended.
Physical examination -- atrophy	Atrophy in affected limb with 2 cm difference between limbs.	Recommended.
Physical examination: straight leg raise	Positive straight leg raise	Recommended.
Sensory examination	Loss of sensation in affected dermatomes	Recommended.
Medical record review: lumbar	History of radicular pain	Highly recommended.
Computerized tomography	Evidence of laminectomy	Recommended.
Myelogram	Evidence of laminectomy	Recommended.
Radiculopathy:		
Magnetic resonance imaging	Evidence of neural compression	Recommended.
Electromyography	Definite denervation	Recommended.

E. Lumbar Sacral Spine—Continued

Confirmatory test	Minimum result	Requirements
Nerve conduction velocity	Definite slowing	Recommended.
Physical examination -- atrophy	Atrophy in affected limb with 2 cm difference between limbs.	Recommended.
Physical examination: straight leg raise	Positive straight leg raise	Recommended.
Sensory examination	Loss of sensation in affected dermatomes	Recommended.
Medical record review: lumbar	History of radicular pain	Highly recommended.
Computerized tomography	Evidence of neural compression	Recommended.
Myelogram	Evidence of neural compression	Recommended.
Sciatica:		
Magnetic resonance imaging	Evidence of neural compression	Recommended.
Electromyography	Definite denervation	Recommended.
Nerve conduction velocity	Definite slowing	Recommended.
Physical examination -- atrophy	Atrophy in affected limb with 2 cm difference between limbs.	Recommended.
Physical examination: straight leg raise	Positive straight leg raise	Recommended.
Sensory examination	Loss of sensation in affected dermatomes	Recommended.
Medical history	History of radicular pain	Highly recommended.
Computerized tomography	Evidence of neural compression	Recommended.
Myelogram	Evidence of neural compression	Recommended.
Strains and sprains, unspecified:		
Medical record review	History of back pain under medical treatment for at least 1 year.	Highly recommended.
Medical record review	History of back pain unresponsive to therapy for at least 1 year.	Highly recommended.
Medical record review	History of back pain with functional limitations for at least 1 year.	Highly recommended.
Medical record review	Documented history of strain and/or sprain	Highly recommended.
Spondylolisthesis grade 1:		
X-ray-lumbar sacral spine	1 - 25% slippage	Recommended.
Computerized tomography	1 - 25% slippage	Recommended.
Magnetic resonance imaging	1 - 25% slippage	Recommended.
Spondylolisthesis grade 2:		
X-ray-lumbar sacral spine	26 - 50% slippage	Recommended.
Computerized tomography	26 - 50% slippage	Recommended.
Magnetic resonance imaging	26 - 50% slippage	Recommended.
Spondylolisthesis grade 3:		
X-ray-lumbar sacral spine	51 - 75% slippage	Recommended.
Computerized tomography	51 - 75% slippage	Recommended.
Magnetic resonance imaging	51 - 75% slippage	Recommended.
Spondylolisthesis grade 4:		
X-ray-lumbar sacral spine	Complete slippage	Recommended.
Computerized tomography	Complete slippage	Recommended.
Magnetic resonance imaging	Complete slippage	Recommended.
Spondylolisthesis-acquired:		
X-ray-lumbar sacral spine	Slippage	Recommended.
Computerized tomography	Slippage	Recommended.
Magnetic resonance imaging	Slippage	Recommended.
Spondylolsis:		
X-ray-lumbar sacral spine	Defect -- pars interarticularis	Recommended.
Computerized tomography	Defect -- pars interarticularis	Recommended.
Magnetic resonance imaging	Defect -- pars interarticularis	Recommended.
Sprains and strains, sacral:		
Medical record review: lumbar	History of back pain under medical treatment for at least 1 year.	Highly recommended.
Medical record review: lumbar	History of back pain unresponsive to therapy for at least 1 year.	Highly recommended.
Medical record review: lumbar	History of back with functional limitations for at least 1 year.	Highly recommended.
Medical record review: lumbar	Documented history of strain and/or sprain	Highly recommended.
Sprains and strains, sacroiliac:		
Medical record review: lumbar	History of back pain under medical treatment for at least 1 year.	Highly recommended.
Medical record review: lumbar	History of back pain unresponsive to therapy for at least 1 year.	Highly recommended.
Medical record review: lumbar	History of back pain with functional limitations for at least 1 year.	Highly recommended.
Medical record review: lumbar	Documented history of strain and/or sprain	Highly recommended.

Disability test	Test result	Disability classification
BODY PART: LS SPINE JOB TITLE: TRAINMAN		
Ankylosing spondylitis:		
Muscle strength assessment	Lifting capacity diminished by 50%	D
Backache, unspecified:		
Muscle strength assessment	Lifting capacity diminished by 50%	D
Chronic back pain, not otherwise specified:		
Muscle strength assessment	Lifting capacity diminished by 50%	D
Cauda equina syndrome with bowel or bladder dysfunction:		
Computerized tomography	Disc extrusion with neural impingement, nerves < L1	D
Magnetic resonance imaging	Disc extrusion with neural impingement, nerves < L1	D
Physical examination	Lower extremity weakness	D
Cystometrogram	Impaired bladder function	D
Myelogram	Disc extrusion with neural impingement, nerves <L1	D
Physical examination: rectal	Impairment of sphincter tone	D
Muscle strength assessment	Lifting capacity diminished by 50%	D
Degeneration of lumbar disc:		
Computerized tomography	Disc extrusion with neural impingement	D
Magnetic resonance imaging	Disc extrusion with neural impingement	D
Myelogram	Disc extrusion with neural impingement	D
Muscle strength assessment	Lifting capacity diminished by 50%	D
Displacement of lumbar disc:		
Computerized tomography	Disc extrusion with neural impingement	D
Magnetic resonance imaging	Disc extrusion with neural impingement	D
Myelogram	Disc extrusion with neural impingement	D
Muscle strength assessment	Lifting capacity diminished by 50%	D
Fracture: vertebral body:		
Muscle strength assessment	Lifting capacity diminished by 50%	D
Fracture: posterior spinal element with displacement:		
Muscle strength assessment	Lifting capacity diminished by 50%	D
Fracture: posterior spinal element with no displacement:		
Muscle strength assessment	Lifting capacity diminished by 50%	D
Fracture: spinous process:		
Muscle strength assessment	Lifting capacity diminished by 50%	D
Fracture transverse process:		
Muscle strength assessment	Lifting capacity diminished by 50%	D
Intervertebral disc disorder:		
Muscle strength assessment	Lifting capacity diminished by 50%	D
Computerized tomography	Disc extrusion with neural impingement	D
Magnetic resonance imaging	Disc extrusion with neural impingement	D
Myelogram	Disc extrusion with neural impingement	D
Lumbago:		
Muscle strength assessment	Lifting capacity diminished by 50%	D
Lumbosacral neuritis:		
Computerized tomography	Disc extrusion with neural impingement	D
Magnetic resonance imaging	Disc extrusion with neural impingement	D
Myelogram	Disc extrusion with neural impingement	D
Muscle strength assessment	Lifting capacity diminished by 50%	D
Physical examination	Lower extremity weakness	D
Lumbar spinal stenosis:		
Muscle strength assessment	Lifting capacity diminished by 50%	D
Computerized tomography	Significant narrowing of the spinal canal	D
Magnetic resonance imaging	Significant narrowing of the spinal canal	D
Myelogram	Significant narrowing of the spinal canal	D
Physical examination	Significant lower extremity weakness	D
Mechanical complication of internal orthopedic device:		
Muscle strength assessment	Lifting capacity diminished by 50%	D
X-ray flexion/extension	Segmental instability	D
Osteomalacia:		
Muscle strength assessment	Lifting capacity diminished by 50%	D
Osteomyelitis, chronic-lumbar:		
Muscle strength assessment	Lifting capacity diminished by 50%	D
Medical record review	Frequent flare-ups with objective findings	D
Osteoporosis:		
Muscle strength assessment	Lifting capacity diminished by 50%	D
Post laminectomy syndrome with radiculopathy:		
Muscle strength assessment	Lifting capacity diminished by 50%	D
Computerized tomography	Disc extrusion with neural impingement	D
Magnetic resonance imaging	Disc extrusion with neural impingement	D
Myelogram	Disc extrusion with neural impingement	D

Disability test	Test result	Disability classification
Physical examination	Significant lower extremity weakness	D
Post laminectomy syndrome:		
Muscle strength assessment	Lifting capacity diminished by 50%	D
Computerized tomography	Disc extrusion with neural impingement	D
Magnetic resonance imaging	Disc extrusion with neural impingement	D
Myelogram	Disc extrusion with neural impingement	D
Physical examination	Significant lower extremity weakness	D
X-ray flexion/extension	Segmental instability	D
Radiculopathy:		
Muscle strength assessment	Lifting capacity diminished by 50%	D
Computerized tomography	Disc extrusion with neural impingement	D
Magnetic resonance imaging	Disc extrusion with neural impingement	D
Myelogram	Disc extrusion with neural impingement	D
Physical examination	Significant lower extremity weakness	D
Sciatica:		
Muscle strength assessment	Lifting capacity diminished by 50%	D
Computerized tomography	Disc extrusion with neural impingement	D
Magnetic resonance imaging	Disc extrusion with neural impingement	D
Myelogram	Disc extrusion with neural impingement	D
Physical examination	Significant lower extremity weakness	D
Strains and sprains, unspecified:		
Muscle strength assessment	Lifting capacity diminished by 50%	D
Spondylolisthesis grade 1:		
Muscle strength assessment	Lifting capacity diminished by 50%	D
X-ray flexion/extension	Segmental instability	D
Spondylolisthesis grade 2:		
Muscle strength assessment	Lifting capacity diminished by 50%	D
Spondylolisthesis grade 3:		
Muscle strength assessment	Lifting capacity diminished by 50%	D
Spondylolisthesis grade 4:		
Muscle strength assessment	Lifting capacity diminished by 50%	D
X-ray flexion/extension	Segmental instability	D
Spondylolisthesis -- acquired:		
X-ray flexion/extension	Segmental instability	D
Spondylolysis:		
X-ray flexion/extension	Segmental instability	D
Sprains and strains, sacral:		
Muscle strength assessment	Lifting capacity diminished by 50%	D
Sprains and strains, sacroiliac:		
Muscle strength assessment	Lifting capacity diminished by 50%	D
Vertebral body compression fracture:		
Muscle strength assessment	Lifting capacity diminished by 50%	D
BODY PART: LS SPINE JOB TITLE: ENGINEER		
Cauda equina syndrome with bowel or bladder dysfunction:		
Computerized tomography	Disc extrusion with neural impingement, nerves <L1	D
Magnetic resonance imaging	Disc extrusion with neural impingement, nerves <L1	D
Physical examination	Lower extremity weakness	D
Cystometrogram	Impaired bladder function	D
Myelogram	Disc extrusion with neural impingement, nerves <L1	D
Physical examination: rectal	Impairment of sphincter tone	D
BODY PART: LS SPINE JOB TITLE: CARMAN		
Ankylosing spondylitis:		
Muscle strength assessment	Lifting capacity diminished by 50%	D
Backache, unspecified:		
Muscle strength assessment	Lifting capacity diminished by 50%	D
Chronic back pain, not otherwise specified:		
Muscle strength assessment	Lifting capacity diminished by 50%	D
Cauda equina syndrome with bowel or bladder dysfunction:		
Computerized tomography	Disc extrusion with neural impingement, nerves <L1	D
Magnetic resonance imaging	Disc extrusion with neural impingement, nerves <L1	D
Physical examination	Lower extremity weakness	D
Cystometrogram	Impaired bladder function	D
Myeolgram	Disc extrusion with neural impingement, nerves <L1	D
Physical examination: rectal	Impairment of sphincter tone	D

Disability test	Test result	Disability classification
Muscle strength assessment	Lifting capacity diminished by 50%	D
Degeneration of lumbar disc:		
Computerized tomography	Disc extrusion with neural impingement	D
Magnetic resonance imaging	Disc extrusion with neural impingement	D
Myelogram	Disc extrusion with neural impingement	D
Muscle strength assessment	Lifting capacity diminished by 50%	D
Displacement of lumbar disc:		
Computerized tomography	Disc extrusion with neural impingement	D
Magnetic resonance imaging	Disc extrusion with neural impingement	D
Myelogram	Disc extrusion with neural impingement	D
Muscle strength assessment	Lifting capacity diminished by 50%	D
Fracture: vertebral body:		
Muscle strength assessment	Lifting capacity diminished by 50%	D
Fracture: posterior spinal element with displacement:		
Muscle strength assessment	Lifting capacity diminished by 50%	D
Fracture: posterior spinal element with no displacement:		
Muscle strength assessment	Lifting capacity diminished by 50%	D
Fracture: spinous process:		
Muscle strength assessment	Lifting capacity diminished by 50%	D
Fracture transverse process:		
Muscle strength assessment	Lifting capacity diminished by 50%	D
Intervertebral disc disorder:		
Muscle strength assessment	Lifting capacity diminished by 50%	D
Computerized tomography	Disc extrusion with neural impingement	D
Magnetic resonance imaging	Disc extrusion with neural impingement	D
Myelogram	Disc extrusion with neural impingement	D
Lumbago:		
Muscle strength assessment	Lifting capacity diminished by 50%	D
Lumbosacral neuritis:		
Computerized tomography	Disc extrusion with neural impingement	D
Magnetic resonance imaging	Disc extrusion with neural impingement	D
Myelogram	Disc extrusion with neural impingement	D
Muscle strength assessment	Lifting capacity diminished by 50%	D
Physical examination	Lower extremity weakness	D
Lumbar spinal stenosis:		
Muscle strength assessment	Lifting capacity diminished by 50%	D
Computerized tomography	Significant narrowing of the spinal canal	D
Magnetic resonance imaging	Significant narrowing of the spinal canal	D
Myelogram	Significant narrowing of the spinal canal	D
Physical examination	Significant lower extremity weakness	D
Mechanical complication of internal orthopedic device:		
Muscle strength assessment	Lifting capacity diminished by 50%	D
X-ray flexion/extension	Segmental instability	D
Osteomalacia:		
Muscle strength assessment	Lifting capacity diminished by 50%	D
Osteomyelitis, chronic-lumbar:		
Muscle strength assessment	Lifting capacity diminished by 50%	D
Medical record review	Frequent flare-ups with objective findings	D
Osteoporosis:		
Muscle strength assessment	Lifting capacity diminished by 50%	D
Post laminectomy syndrome with radiculopathy:		
Muscle strength assessment	Lifting capacity diminished by 50%	D
Computerized tomography	Disc extrusion with neural impingement	D
Magnetic resonance imaging	Disc extrusion with neural impingement	D
Myelogram	Disc extrusion with neural impingement	D
Physical examination	Significant lower extremity weakness	D
Post laminectomy syndrome:		
Muscle strength assessment	Lifting capacity diminished by 50%	D
Computerized tomography	Disc extrusion with neural impingement	D
Magnetic resonance imaging	Disc extrusion with neural impingement	D
Myelogram	Disc extrusion with neural impingement	D
Physical examination	Significant lower extremity weakness	D
X-ray flexion/extension	Segmental instability	D
Radiculopathy:		
Muscle strength assessment	Lifting capacity diminished by 50%	D
Computerized tomography	Disc extrusion with neural impingement	D
Magnetic resonance imaging	Disc extrusion with neural impingement	D
Myelogram	Disc extrusion with neural impingement	D
Physical examination	Significant lower extremity weakness	D
Sciatica:		
Muscle strength assessment	Lifting capacity diminished by 50%	D
Computerized tomography	Disc extrusion with neural impingement	D

Disability test	Test result	Disability classification
Magnetic resonance imaging	Disc extrusion with neural impingement	D
Myelogram	Disc extrusion with neural impingement	D
Physical examination	Significant lower extremity weakness	D
Strains and sprains, unspecified:		
Muscle strength assessment	Lifting capacity diminished by 50%	D
Spondylolisthesis grade 1:		
Muscle strength assessment	Lifting capacity diminished by 50%	D
X-ray flexion/extension	Segmental instability	D
Spondylolisthesis grade 2:		
Muscle strength assessment	Lifting capacity diminished by 50%	D
Spondylolisthesis grade 3:		
Muscle strength assessment	Lifting capacity diminshed by 50%	D
Spondylolisthesis grade 4:		
Muscle strength assessment	Lifting capacity diminished by 50%	D
X-ray flexion/extension	Segmental instability	D
Spondylolisthesis-acquired:		
X-ray flexion/extension	Segmental instability	D
Spondylolysis:		
X-ray flexion/extension	Segmental instability	D
Sprains and strains, sacral:		
Muscle strength assessment	Lifting capacity diminshed by 50%	D
Sprains and strains, sacroiliac:		
Muscle strength assessment	Lifting capacity diminished by 50%	D
Vertebral body compression fracture:		
Muscle strength assessment	Lifting capacity diminshed by 50%	D
BODY PART: LS SPINE JOB TITLE: SIGNALMAN		
Ankylosing spondylitis:		
Muscle strength assessment	Lifting capacity diminished by 50%	D
Backache, unspecified:		
Muscle strength assessment	Lifting capacity diminished by 50%	D
Chronic back pain, not otherwise specified:		
Muscle strength assessment	Lifting capacity diminished by 50%	D
Cauda equina syndrome with bowel or bladder dysfunction:		
Computerized tomography	Disc extrusion with neural impingement, nerves <L1	D
Magnetic resonance imaging	Disc extrusion with neural impingement, nerves <L1	D
Physical examination	Lower extremity weakness	D
Cystometrogram	Impaired bladder function	D
Myelogram	Disc extrusion with neural impingement, nerves <L1	D
Physical examination: rectal	Impairment of sphincter tone	D
Muscle strength assessment	Lifting capacity diminished by 50%	D
Degeneration of lumbar disc:		
Computerized tomography	Disc extrusion with neural impingement	D
Magnetic resonance imaging	Disc extrusion with neural impingement	D
Myelogram	Disc extrusion with neural impingement	D
Muscle strength assessment	Lifting capacity diminished by 50%	D
Displacement of lumbar disc:		
Computerized tomography	Disc extrusion with neural impingement	D
Magnetic resonance imaging	Disc extrusion with neural impingement	D
Myelogram	Disc extrusion with neural impingement	D
Muscle strength assessment	Lifting capacity diminished by 50%	D
Fracture: vertebral body:		
Muscle strength assessment	Lifting capacity diminished by 50%	D
Fracture: posterior spinal element with displacement:		
Muscle strength assessment	Lifting capacity diminished by 50%	D
Fracture: posterior spinal element with no displacement:		
Muscle strength assessment	Lifting capacity diminished by 50%	D
Fracture: spinous process:		
Muscle strength assessment	Lifting capacity diminished by 50%	D
Fracture transverse process:		
Muscle strength assessment	Lifting capacity diminished by 50%	D
Intervertebral disc disorder:		
Muscle strength assessment	Lifting capacity diminished by 50%	D
Computerized tomography	Disc extrusion with neural impingement	D
Magnetic resonance imaging	Disc extrusion with neural impingement	D
Myelogram	Disc extrusion with neural impingement	D
Lumbago:		
Muscle strength assessment	Lifting capacity diminished by 50%	D
Lumbosacral neuritis:		
Computerized tomography	Disc extrusion with neural impingement	D

Disability test	Test result	Disability classification
Magnetic resonance imaging	Disc extrusion with neural impingement	D
Myelogram	Disc extrusion with neural impingement	D
Muscle strength assessment	Lifting capacity diminished by 50%	D
Physical examination	Lower extremity weakness	D
Lumbar spinal stenosis:		
Muscle strength assessment	Lifting capacity diminished by 50%	D
Computerized tomography	Significant narrowing of the spinal canal	D
Magnetic resonance imaging	Significant narrowing of the spinal canal	D
Myelogram	Significant narrowing of the spinal canal	D
Physical examination	Significant lower extremity weakness	D
Mechanical complication of internal orthopedic device:		
Muscle strength assessment	Lifting capacity diminished by 50%	D
X-ray flexion/extension	Segmental instability	D
Osteomalacia:		
Muscle strength assessment	Lifting capacity diminished by 50%	D
Osteomyelitis, chronic-lumbar:		
Muscle strength assessment	Lifting capacity diminished by 50%	D
Medical record review	Frequent flare-ups with objective findings	D
Osteoporosis:		
Muscle strength assessment	Lifting capacity diminished by 50%	D
Post laminectomy syndrome with radiculopathy:		
Muscle strength assessment	Lifing capacity diminished by 50%	D
Computerized tomography	Disc extrusion with neural impingement	D
Magnetic resonance imaging	Disc extrusion with neural impingement	D
Myelogram	Disc extrusion with neural impingement	D
Physical examination	Significant lower extremity weakness	D
Post laminectomy syndrome:		
Muscle strength assessment	Lifting capacity diminished by 50%	D
Computerized tomography	Disc extrusion with neural impingement	D
Magnetic resonance imaging	Disc extrusion with neural impingement	D
Myelogram	Disc extrusion with neural impingement	D
Physical examination	Significant lower extremity weakness	D
X-ray flexion/extension	Segmental instability	D
Radiculopathy:		
Muscle strength assessment	Lifting capacity diminished by 50%	D
Computerized tomography	Disc extrusion with neural impingement	D
Magnetic resonance imaging	Disc extrusion with neural impingement	D
Myelogram	Disc extrusion with neural impingement	D
Physical examination	Significant lower extremity weakness	D
Sciatica:		
Muscle strength assessment	Lifting capacity diminished by 50%	D
Computerized tomography	Disc extrusion with neural impingement	D
Magnetic resonance imaging	Disc extrusion with neural impingement	D
Myelogram	Disc extrusion with neural impingement	D
Physical examination	Significant lower extremity weakness	D
Strains and sprains, unspecified:		
Muscle strength assessment	Lifting capacity diminished by 50%	D
Spondylolisthesis grade 1:		
Muscle strength assessment	Lifting capacity diminished by 50%	D
X-ray flexion/extension	Segmental instability	D
Spondylolisthesis grade 2:		
Muscle strength assessment	Lifting capacity diminished by 50%	D
Spondylolisthesis grade 3:		
Muscle strength assessment	Lifting capacity diminished by 50%	D
Spondylolisthesis grade 4:		
Muscle strength assessment	Lifting capacity diminished by 50%	D
X-ray flexion/extension	Segmental instability	D
Spondylolisthesis-acquired:		
X-ray flexion/extension	Segmental instability	D
Spondylolysis:		
X-ray flexion/extension	Segmental instability	D
Sprains and strains, sacral:		
Muscle strength assessment	Lifting capacity diminished by 50%	D
Sprains and strains, sacroiliac:		
Muscle strength assessment	Lifting capacity diminished by 50%	D
Vertebral body compression fracture:		
Muscle strength assessment	Lifting capacity diminished by 50%	D

BODY PART: LS SPINE
JOB TITLE: TRACKMAN

Ankylosing spondylitis:		
Muscle strength assessment	Lifting capacity diminished by 50%	D

Disability test	Test result	Disability classification
Backache, unspecified:		
Muscle strength assessment	Lifting capacity diminished by 50%	D
Chronic back pain, not otherwise specified:		
Muscle strength assessment	Lifing capacity diminished by 50%	D
Cauda equina syndrome with bowel or bladder dysfunction:		
Computerized tomography	Disc extrusion with neural impingement, nerves <L1	D
Magnetic resonance imaging	Disc extrusion with neural impingement, nerves <L1	D
Physical examination	Lower extremity weakness	D
Cystometrogram	Impaired bladder function	D
Myelogram	Disc extrusion with neural impingement, nerves <L1	D
Physical examination: rectal	Impairment of sphincter tone	D
Muscle strength assessment	Lifting capacity diminished by 50%	D
Degeneration of lumbar disc:		
Computerized tomography	Disc extrusion with neural impingement	D
Magnetic resonance imaging	Disc extrusion with neural impingement	D
Myelogram	Disc extrusion with neural impingement	D
Muscle strength assessment	Lifting capacity diminished by 50%	D
Displacement of lumbar disc:		
Computerized tomography	Disc extrusion with neural impingement	D
Magnetic resonance imaging	Disc extrusion with neural impingement	D
Myelogram	Disc extrusion with neural impingement	D
Muscle strength assessment	Lifting capacity diminished by 50%	D
Fracture: vertebral body:		
Muscle strength assessment	Lifting capacity diminished by 50%	D
Fracture: posterior spinal element with displacement:		
Muscle strength assessment	Lifting capacity diminished by 50%	D
Fracture: posterior spinal element with no displacement:		
Muscle strength assessment	Lifting capacity diminished by 50%	D
Fracture: spinous process:		
Muscle strength assessment	Lifting capacity diminished by 50%	D
Fracture transverse process:		
Muscle strength assessment	Lifting capacity diminished by 50%	D
Intervertebral disc disorder:		
Muscle strength assessment	Lifting capacity diminished by 50%	D
Computerized tomography	Disc extrusion with neural impingement	D
Magnetic resonance imaging	Disc extrusion with neural impingement	D
Myelogram	Disc extrusion with neural impingement	D
Lumbago:		
Muscle strength assessment	Lifting capacity diminished by 50%	D
Lumbosacral neuritis:		
Computerized tomography	Disc extrusion with neural impingement	D
Magnetic resonance imaging	Disc extrusion with neural impingement	D
Myelogram	Disc extrusion with neural impingement	D
Muscle strength assessment	Lifting capacity diminished by 50%	D
Physical examination	Lower extremity weakness	D
Lumbar spinal stenosis:		
Muscle strength assessment	Lifting capacity diminished by 50%	D
Computerized tomography	Significant narrowing of the spinal canal	D
Magnetic resonance imaging	Significant narrowing of the spinal canal	D
Myelogram	Significant narrowing of the spinal canal	D
Physcial examination	Significant lower extremity weakness	D
Mechanical complication of internal orthopedic device:		
Muscle strength assessment	Lifting capacity diminished by 50%	D
X-ray flexion/extension	Segmental instability	D
Osteomalacia:		
Muscle strength assessment	Lifting capacity diminished by 50%	D
Osteomyelitis, chronic-lumbar:		
Muscle strength assessment	Lifting capacity diminished by 50%	D
Medical record review	Frequent flare-ups with objective findings	D
Osteoporosis:		
Muscle strength assessment	Lifting capacity diminished by 50%	D
Post laminectomy syndrome with radiculopathy:		
Muscle strength assessment	Lifting capacity diminished by 50%	D
Computerized tomography	Disc extrusion with neural impingement	D
Magnetic resonance imaging	Disc extrusion with neural impingement	D
Myelogram	Disc extrusion with neural impingement	D
Physical examination	Significant lower extremity weakness	D
Post laminectomy syndrome:		
Muscle strength assessment	Lifting capacity diminished by 50%	D
Computerized tomography	Disc extrusion with neural impingement	D
Magnetic resonance imaging	Disc extrusion with neural impingement	D

Disability test	Test result	Disability classification
Myelogram	Disc extrusion with neural impingement	D
Physical examination	Significant lower extremity weakness	D
X-ray flexion/extension	Segmental instability	D
Radiculopathy:		
Muscle strength assessment	Lifting capacity diminished by 50%	D
Computerized tomography	Disc extrusion with neural impingement	D
Magnetic resonance imaging	Disc extrusion with neural impingement	D
Myelogram	Disc extrusion with neural impingement	D
Physical examination	Significant lower extremity weakness	D
Sciatica:		
Muscle strength assessment	Lifting capacity diminished by 50%	D
Computerized tomography	Disc extrusion with neural impingement	D
Magnetic resonance imaging	Disc extrusion with neural impingement	D
Myelogram	Disc extrusion with neural impingement	D
Physical examination	Significant lower extremity weakness	D
Strains and sprains, unspecified:		
Muscle strength assessment	Lifting capacity diminished by 50%	D
Spondylolisthesis grade 1:		
Muscle strength assessment	Lifting capacity diminished by 50%	D
X-ray flexion/extension	Segmental instability	D
Spondylolisthesis grade 2:		
Muscle strength assessment	Lifting capacity diminished by 50%	D
Spondylolisthesis grade 3:		
Muscle strength assessment	Lifting capacity diminished by 50%	D
Spondylolisthesis grade 4:		
Muscle strength assessment	Lifting capacity diminished by 50%	D
X-ray flexion/extension	Segmental instability	D
Spondylolisthesis-acquired:		
X-ray flexion/extension	Segmental instability	D
Spondylolysis:		
X-ray flexion/extension	Segmental instability	D
Sprains and strains, sacral:		
Muscle strength assessment	Lifting capacity diminished by 50%	D
Sprains and strains, sacroiliac:		
Muscle strength assessment	Lifting capacity diminished by 50%	D
Vetebral body compression fracture:		
Muscle strength assessment	Lifting capacity diminished by 50%	
BODY PART: LS SPINE JOB TITLE: MACHINIST		
Ankylosing spondylitis:		
Muscle strength assessment	Lifting capacity diminished by 50%	D
Backache, unspecified:		
Muscle strength assessment	Lifting capacity diminished by 50%	D
Chronic back pain, not otherwise specified:		
Muscle strength assessment	Lifting capacity diminished by 50%	D
Cauda equina syndrome with bowel or bladder dysfunction:		
Computerized tomography	Disc extrusion with neural impingement, nerves <L1	D
Magnetic resonance imaging	Disc extrusion with neural impingement, nerves <L1	D
Physical examination	Lower extremity weakness	D
Cystometrogram	Impaired bladder function	D
Myelogram	Disc extrusion with neural impingement, nerves <L1	D
Physical examination: rectal	Impairment of sphincter tone	D
Muscle strength assessment	Lifting capacity diminished by 50%	D
Degeneration of lumbar disc:		
Computerized tomography	Disc extrusion with neural impingement	D
Magnetic resonance imaging	Disc extrusion with neural impingement	D
Myelogram	Disc extrusion with neural impingement	D
Muscle strength assessment	Lifting capacity diminished by 50%	D
Displacement of lumbar disc:		
Computerized tomography	Disc extrusion with neural impingement	D
Magnetic resonance imaging	Disc extrusion with neural impingement	D
Myelogram	Disc extrusion with neural impingement	D
Muscle strength assessment	Lifting capacity diminished by 50%	D
Fracture: vertebral body:		
Muscle strength assessment	Lifting capacity diminished by 50%	D
Fracture: posterior spinal element with displacement:		
Muscle strength assessment	Lifting capacity diminished by 50%	D
Fracture: posterior spinal element with no displacement:		
Muscle strength assessment	Lifting capacity diminished by 50%	D

Disability test	Test result	Disability classification
Fracture: spinous process:		
Muscle strength assessment	Lifting capacity diminished by 50%	D
Fracture transverse process:		
Muscle strength assessment	Lifting capacity diminished by 50%	D
Intervertebral disc disorder:		
Muscle strength assessment	Lifting capacity diminished by 50%	D
Computerized tomography	Disc extrusion with neural impingement	D
Magnetic resonance imaging	Disc extrusion with neural impingement	D
Myelogram	Disc extrusion with neural impingement	D
Lumbago:		
Muscle strength assessment	Lifting capacity diminished by 50%	D
Lumbosacral neuritis:		
Computerized tomography	Disc extrusion with neural impingement	D
Magnetic resonance imaging	Disc extrusion with neural impingement	D
Myelogram	Disc extrusion with neural impingement	D
Muscle strength assessment	Lifting capacity diminished by 50%	D
Physical examination	Lower extremity weakness	D
Lumbar spinal stenosis:		
Muscle strength assessment	Lifting capacity diminished by 50%	D
Computerized tomography	Significant narrowing of the spinal canal	D
Magnetic resonance imaging	Significant narrowing of the spinal canal	D
Myelogram	Significant narrowing of the spinal canal	D
Physical examination	Significant lower extremity weakness	D
Mechanical complication of internal orthopedic device:		
Muscle strength assessment	Lifting capacity diminished by 50%	D
X-ray flexion/extension	Segmental instability	D
Osteomalacia:		
Muscle strength assessment	Lifting capacity diminished by 50%	D
Osteomyelitis, chronic-lumbar:		
Muscle strength assessment	Lifting capacity diminished by 50%	D
Medical record review	Frequent flare-ups with objective findings	D
Osteoporosis:		
Muscle strength assessment	Lifting capacity diminished by 50%	D
Post laminectomy syndrome with radiculopathy:		
Muscle strength assessment	Lifting capacity diminished by 50%	D
Computerized tomography	Disc extrusion with neural impingement	D
Magnetic resonance imaging	Disc extrusion with neural impingement	D
Myelogram	Disc extrusion with neural impingement	D
Physical examination	Significant lower extremity weakness	D
Post laminectomy syndrome:		
Muscle strength assessment	Lifting capacity diminished by 50%	D
Computerized tomography	Disc extrusion with neural impingement	D
Magnetic resonance imaging	Disc extrusion with neural impingement	D
Myelogram	Disc extrusion with neural impingement	D
Physical examination	Significant lower extremity weakness	D
X-ray flexion/extension	Segmental instability	D
Radiculopathy:		
Muscle strength assessment	Lifting capacity diminished by 50%	D
Computerized tomography	Disc extrusion with neural impingement	D
Magnetic resonance imaging	Disc extrusion with neural impingement	D
Myelogram	Disc extrusion with neural impingement	D
Physical examination	Significant lower extremity weakness	D
Sciatica:		
Muscle strength assessment	Lifting capacity diminished by 50%	D
Computerized tomography	Disc extrusion with neural impingement	D
Magnetic resonance imaging	Disc extrusion with neural impingement	D
Myelogram	Disc extrusion with neural impingement	D
Physical examination	Significant lower extremity weakness	D
Strains and sprains, unspecified:		
Muscle strength assessment	Lifting capacity diminished by 50%	D
Spondylolisthesis grade I:		
Muscle strength assessment	Lifting capacity diminished by 50%	D
X-ray flexion/extension	Segmental instability	D
Spondylolisthesis grade 2:		
Muscle strength assessment	Lifting capacity diminished by 50%	D
Spondylolisthesis grade 3:		
Muscle strength assessment	Lifting capacity diminished by 50%	D
Spondylolisthesis grade 4:		
Muscle strength assessment	Lifting capacity diminished by 50%	D
X-ray flexion/extension	Segmental instability	D
Spondylolisthesis-acquired:		
X-ray flexion/extension	Segmental instability	D

Disability test	Test result	Disability classification
Spondylolysis:		
X-ray flexion/extension	Segmental instability	D
Sprains and strains, sacral:		
Muscle strength assessment	Lifting capacity diminished by 50%	D
Sprains and strains, sacroiliac:		
Muscle strength assessment	Lifting capacity diminished by 50%	D
Vertebral body compression fracture:		
Muscle strength assessment	Lifting capacity diminished by 50%	D
BODY PART: LS SPINE JOB TITLE: SHOP LABORER		
Ankylosing spondylitis:		
Muscle strength assessment	Lifting capacity diminished by 50%	D
Backache, unspecified:		
Muscle strength assessment	Lifting capacity diminished by 50%	D
Chronic back pain, not otherwise specified:		
Muscle strength assessment	Lifting capacity diminished by 50%	D
Cauda equina syndrome with bowel or bladder dysfunction:		
Computerized tomography	Disc extrusion with neural impingement, nerves <L1	D
Magnetic resonance imaging	Disc extrusion with neural impingement, nerves <L1	D
Physical examination	Lower extremity weakness	D
Cystometrogram	Impaired bladder function	D
Myelogram	Disc extrusion with neural impingement, nerves <L1	D
Physical examination: rectal	Impairment of sphincter tone	D
Muscle strength assessment	Lifting capacity diminished by 50%	D
Degeneration of lumbar disc:		
Computerized tomography	Disc extrusion with neural impingement	D
Magnetic resonance imaging	Disc extrusion with neural impingement	D
Myelogram	Disc extrusion with neural impingement	D
Muscle strength assessment	Lifting capacity diminished by 50%	D
Displacement of lumber disc:		
Computerized tomography	Disc extrusion with neural impingement	D
Magnetic resonance imaging	Disc extrusion with neural impingement	D
Myelogram	Disc extrusion with neural impingement	D
Muscle strength assessment	Lifting capacity diminished by 50%	D
Fracture: vertebral body:		
Muscle strength assessment	Lifting capacity diminished by 50%	D
Fracture: posterior spinal element with displacement:		
Muscle strength assessment	Lifting capacity diminished by 50%	D
Fracture: posterior spinal element with no displacement:		
Muscle strength assessment	Lifting capacity diminished by 50%	D
Fracture: spinous process:		
Muscle strength assessment	Lifting capacity diminished by 50%	D
Fracture transverse process:		
Muscle strength assessment	Lifting capacity diminished by 50%	D
Intervertebral disc disorder:		
Muscle strength assessment	Lifting capacity diminished by 50%	D
Computerized tomography	Disc extrusion with neural impingement	D
Magnetic resonance imaging	Disc extrusion with neural impingement	D
Myelogram	Disc extrusion with neural impingement	D
Lumbago:		
Muscle strength assessment	Lifting capacity diminished by 50%	D
Lumbosacral neuritis:		
Computerized tomography	Disc extrusion with neural impingement	D
Magnetic resonance imaging	Disc extrusion with neural impingement	D
Myelogram	Disc extrusion with neural impingement	D
Muscle strength assessment	Lifting capacity diminished by 50%	D
Physical examination	Lower extremity weakness	D
Lumbar spinal stenosis:		
Muscle strength assessment	Lifting capacity diminished by 50%	D
Computerized tomography	Significant narrowing of the spinal canal	D
Magnetic resonance imaging	Significant narrowing of the spinal canal	D
Myelogram	Significant narrowing of the spinal canal	D
Physical examination	Significant lower extremity weakness	D
Mechanical complication of internal orthopedic device:		
Muscle strength assessment	Lifting capacity diminished by 50%	D
X-ray flexion/extension	Segmental instability	D
Osteomalacia:		
Muscle strength assessment	Lifting capacity diminished by 50%	D
Osteomyelitis, chronic-lumbar:		
Muscle strength assessment	Lifting capacity diminished by 50%	D

Disability test	Test result	Disability classification
Medical record review	Frequent flare-ups with objective findings	D
Osteoporosis:		
Muscle strength assessment	Lifting capacity diminished by 50%	D
Post laminectomy syndrome with radiculopathy:		
Muscle strength assessment	Lifting capacity diminished by 50%	D
Computerized tomography	Disc extrusion with neural impingement	D
Magnetic resonance imaging	Disc extrusion with neural impingement	D
Myelogram	Disc extrusion with neural impingement	D
Physical examination	Significant lower extremity weakness	D
Post laminectomy syndrome:		
Muscle strength assessment	Lifting capacity diminished by 50%	D
Computerized tomography	Disc extrusion with neural impingement	D
Magnetic resonance imaging	Disc extrusion with neural impingement	D
Myelogram	Disc extrusion with neural impingement	D
Physical examination	Significant lower extremity weakness	D
X-ray flexion/extension	Segmental instability	D
Radiculopathy:		
Muscle strength assessment	Lifting capacity diminished by 50%	D
Computerized tomography	Disc extrusion with neural impingement	D
Magnetic resonance imaging	Disc extrusion with neural impingement	D
Myelogram	Disc extrusion with neural impingement	D
Physical examination	Significant lower extremity weakness	D
Sciatica:		
Muscle strength assessment	Lifting capacity diminished by 50%	D
Computerized tomography	Disc extrusion with neural impingement	D
Magnetic resonance imaging	Disc extrusion with neural impingement	D
Myelogram	Disc extrusion with neural impingement	D
Physical examination	Significant lower extremity weakness	D
Strains and sprains, unspecified:		
Muscle strength assessment	Lifting capacity diminished by 50%	D
Spondylolisthesis grade 1:		
Muscle strength assessment	Lifting capacity diminished by 50%	D
X-ray flexion/extension	Segmental instability	D
Spondylolisthesis grade 2:		
Muscle strength assessment	Lifting capacity diminished by 50%	D
Spondylolisthesis grade 3:		
Muscle strength assessment	Lifting capacity diminished by 50%	D
Spondylolisthesis grade 4:		
Muscle strength assessment	Lifting capacity diminished by 50%	D
X-ray flexion/extension	Segmental instability	D
Spondylolisthesis-acquired:		
X-ray flexion/extension	Segmental instability	D
Spondylolysis:		
X-ray flexion/extension	Segmental instability	D
Sprains and strains, sacral:		
Muscle strength assessment	Lifting capacity diminished by 50%	D
Sprains and strains, sacroiliac:		
Muscle strength assessment	Lifting capacity diminished by 50%	D
Vertebral body compression fracture:		
Muscle strength assessment	Lifting capacity diminished by 50%	D

F. Cervical Spine

Confirmatory test	Minimum result	Requirements
BODY PART: CE SPINE CONFIRMATORY TESTS		
Cervical disc disease with myelopathy:		
Physical examination: cervical	Evidence of myelopathy	Highly recommended.
Myelogram	Evidence of neurogenic compression	Recommended.
Computerized axial tomography	Evidence of neurogenic compression	Recommended.
Magnetic resonance imaging	Evidence of neurogenic compression	Recommended.
Chronic herniated disc:		
X-ray: cervical spine	Evidence of significant disc degeneration	Recommended.
Myelogram	Evidence of significant disc degeneration	Recommended.
Computerized axial tomography	Evidence of significant disc degeneration	Recommended.
Magnetic resonance imaging	Evidence of significant disc degeneration	Recommended.
Cervical spondylolysis:		
X-ray: cervical spine	Evidence of significant disc degeneration	Recommended.
Computerized axial tomography	Evidence of significant disc degeneration	Recommended.

F. Cervical Spine—Continued

Confirmatory test	Minimum result	Requirements
Magnetic resonance imaging	Evidence of significant disc degeneration	Recommended.
Cervical intervertebral disc degeneration:		
X-ray: cervical spine	Evidence of significant disc degeneration	Recommended.
Myelogram	Evidence of significant disc degeneration	Recommended.
Magnetic resonance imaging	Evidence of significant disc degeneration	Recommended.
Fracture: posterior element with spinal canal displacement:		
X-ray: cervical spine	Fractured posterior element with canal displacement	Recommended.
Computerized axial tomography	Fractured posterior element with canal displacement	Recommended.
Magnetic resonance imaging	Fractured posterior element with canal displacement	Recommended.
Fracture: transverse, spinous or posterior process:		
X-ray: cervical spine	Fracture of relevant part	Recommended.
Computerized axial tomography	Fracture of relevant part	Recommended.
Magnetic resonance imaging	Fracture of relevant part	Recommended.
Osteoarthritis, cervical:		
X-ray: cervical spine	Evidence of extensive disc degeneration	Recommended.
Computerized axial tomography	Evidence of extensive disc degeneration	Recommended.
Magnetic resonance imaging	Evidence of extensive disc degeneration	Recommended.
Post laminectomy syndrome:		
Medical records: cervical	Confirmed surgical history	Highly recommended.
Medical records: cervical	Continued pain post-surgery	Highly recommended.
Radiculopathy:		
Medical records: cervical	History of radicular pain	Highly recommended.
Physical examination: arm	Loss of reflexes in affected dermatomes	Recommended.
Physical examination: arm	Evidence of atrophy >2 cm	Recommended.
Electromyography	Definite denervation in muscle of affected nerve root	Recommended.
Myelogram	Evidence of neurogenic compression	Recommended.
Magnetic resonance imaging	Compression of spinal nerves	Recommended.
Computerized axial tomography	Compression of spinal nerves	Recommended.
Rheumatoid arthritis, cervical:		
Rheumatoid factor (blood test)	Titer of rheumatoid factor	Recommended.
X-ray: cervical spine	Rheumatoid changes of spine	Highly recommended.
Medical records review: cervical	Confirmation by rheumatologist or internist	Highly recommended.
Spondylogenic compression of spinal cord:		
Physical examination: cervical	Evidence of myelopathy	Highly recommended.
Computerized axial tomography	Evidence of neurogenic compression	Recommended.
Magnetic resonance imaging	Evidence of neurogenic compression	Recommended.
Myelogram	Evidence of neurogenic compression	Recommended.

Disability test	Test result	Disability classification
BODY PART: CE SPINE JOB TITLE: TRAINMAN		
Cervical disc disease with myelopathy:		
Computerized axial tomography	Significant spinal cord pressure	D
Magnetic resonance imaging	Significant spinal cord pressure	D
Myelogram	Significant spinal cord pressure	D
Cystometrogram	Impaired bladder function	D
Physical examination: rectal	Impairment of sphincter tone	
Physical examination: lower limb	Lower extremity weakness or significant spasticity	D
Physical examination	Multi-level neurologic compromise	D
Chronic herniated disc:		
Physical examination	Multi-level neurologic compromise	D
Cervical spondylolysis:		
Physical examination	Multi-level neurologic compromise	D
Cervical intervertebral disc degeneration:		
Physical examination	Multi-level neurologic compromise	D
Fracture: posterior element with spinal canal displacement:		
Physical examination	Multi-level neurologic compromise	D
Post laminectomy syndrome:		
Physical examination	Multi-level neurologic compromise	D
Cervical radiculopathy:		
Physical examination	Multi-level neurologic compromise	D
Spondylogenic compression of spinal cord:		
Computerized axial tomography	Significant spinal cord pressure	D
Magnetic resonance imaging	Significant spinal cord pressure	D
Cystometrogram	Impaired bladder function	D

Disability test	Test result	Disability classification
Myelogram	Significant spinal cord pressure	D
Physical examination: rectal	Impairment of sphincter tone	D
Physical examination	Multi-level neurologic compromise	D
Physical examination: lower limb	Lower extremity weakness or significant spasticity	D
BODY PART: CE SPINE JOB TITLE: ENGINEER		
Cervical disc disease with myelopathy:		
Computerized axial tomography	Significant spinal cord pressure	D
Magnetic resonance imaging	Significant spinal cord pressure	D
Myelogram	Significant spinal cord pressure	D
Cystometrogram	Impaired bladder function	D
Physical examination: rectal	Impairment of sphincter tone	D
Physical examination: lower limb	Lower extremity weakness or significant spasticity	D
Physical examination	Multi-level neurologic compromise	D
Chronic herniated disc:		
Physical examination	Multi-level neurologic compromise	D
Cervical spondylolysis:		
Physical examination	Multi-level neurologic compromise	D
Cervical intervertebral disc degeneration:		
Physical examination	Multi-level neurologic compromise	D
Fracture: posterior element with spinal canal displacement:		
Physical examination	Multi-level neurologic compromise	D
Post laminectomy syndrome:		
Physical examination	Multi-level neurologic compromise	D
Cervical radiculopathy:		
Physical examination:	Multi-level neurologic compromise	D
Spondylogenic compression of spinal cord:		
Computerized axial tomography	Significant spinal cord pressure	D
Magnetic resonance imaging	Significant spinal cord pressure	D
Cystometrogram	Impaired bladder function	D
Myelogram	Significant spinal cord pressure	D
Physical examination: rectal	Impairment of sphincter tone	D
Physical examination	Multi-level neurologic compromise	D
Physical examination: lower limb	Lower extremity weakness or significant spasticity	D
BODY PART: CE SPINE JOB TITLE: DISPATCHER		
Cervical disc disease with myelopathy:		
Cystometrogram	Impaired bladder function	D
Physical examination: rectal	Impairment of sphincter tone	D
Spondylogenic compression of spinal cord:		
Cystometrogram	Impaired bladder function	D
Physical examination: rectal	Impairment of sphincter tone	D
BODY PART: CE SPINE JOB TITLE: CARMAN		
Cervical disc disease with myelopathy:		
Computerized axial tomography	Significant spinal cord pressure	D
Magnetic resonance imaging	Significant spinal cord pressure	D
Myelogram	Significant spinal cord pressure	D
Cystometrogram	Impaired bladder function	D
Physical examination: rectal	Impairment of sphincter tone	D
Physical examination: lower limb	Lower extremity weakness or significant spasticity	D
Physical examination	Multi-level neurologic compromise	D
Chronic herniated disc:		
Physical examination	Multi-level neurologic compromise	D
Cervical spondylolysis:		
Physical examination	Multi-level neurologic compromise	D
Cervical intervertebral disc degeneration:		
Physical examination	Multi-level neurologic compromise	D
Fracture: posterior element with spinal canal displacement:		
Physical examination	Multi-level neurologic compromise	D
Post laminectomy syndrome:		
Physical examination	Multi-level neurologic compromise	D
Cervical radiculopathy:		
Physical examination	Multi-level neurologic compromise	D

Disability test	Test result	Disability classification
Spondylogenic compression of spinal cord:		
Computerized axial tomography	Significant spinal cord pressure	D
Magnetic resonance imaging	Significant spinal cord pressure	D
Cystometrogram	Impaired bladder function	D
Myelogram	Significant spinal cord pressure	D
Physical examination: rectal	Impairment of sphincter tone	D
Physical examination	Multi-level neurologic compromise	D
Physical examination: lower limb	Lower extremity weakness or significant spasticity	D
BODY PART; CE SPINE JOB TITLE: SIGNALMAN		
Cervical disc disease with myelopathy:		
Computerized axial tomography	Significant spinal cord pressure	D
Magnetic resonance imaging	Significant spinal cord pressure	D
Myelogram	Significant spinal cord pressure	D
Cystometrogram	Impaired bladder function	D
Physical examination: rectal	Impairment of sphincter tone	D
Physical examination: lower limb	Lower extremity weakness or significant spasticity	D
Physical examination	Multi-level neurologic compromise	D
Chronic herniated disc:		
Physical examination	Multi-level neurologic compromise	D
Cervical spondylolysis:		
Physical examination	Multi-level neurologic compromise	D
Cervical intervertebral disc degeneration:		
Physical examination	Multi-level neurologic compromise	D
Fracture: posterior element with spinal canal displacement:		
Physical examination	Multi-level neurologic compromise	D
Post laminectomy syndrome:		
Physical examination	Multi-level neurologic compromise	D
Cervical radiculopathy:		
Physical examination	Multi-level neurologic compromise	D
Spondylogenic compression of spinal cord:		
Computerized axial tomography	Significant spinal cord pressure	D
Magnetic resonance imaging	Significant spinal cord pressure	D
Cystometrogram	Impaired bladder function	D
Myelogram	Significant spinal cord pressure	D
Physical examination: rectal	Impairment of sphincter tone	D
Physical examination	Multi-level neurologic compromise	D
Physical examination: lower limb	Lower extremity weakness or significant spasticity	D
BODY PART: CE SPINE JOB TITLE: TRACKMAN		
Cervical disc disease with myelopathy:		
Computerized axial tomography	Significant spinal cord pressure	D
Magnetic resonance imaging	Significant spinal cord pressure	D
Myelogram	Significant spinal cord pressure	D
Cystometrogram	Impaired bladder function	D
Physical examination: rectal	Impairment of sphincter tone	D
Physical examination: lower limb	Lower extremity weakness or significant spasticity	D
Physical examination	Multi-level neurologic compromise	D
Chronic herniated disc:		
Physical examination	Multi-level neurologic compromise	D
Cervical spondyloysis:		
Physical examination	Multi-level neurologic compromise	D
Cervical intervertebral disc degeneration:		
Physical examination	Multi-level neurologic compromise	D
Fracture: posterior element with spinal canal displacement:		
Physical examination	Multi-level neurologic compromise	D
Post laminectomy syndrome:		
Physical examination	Multi-level neurologic compromise	D
Cervical radiculopathy:		
Physical examination	Multi-level neurologic compromise	D
Spondylogenic compression of spinal cord:		
Computerized axial tomography	Significant spinal cord pressure	D
Magnetic resonance imaging	Significant spinal cord pressure	D
Cystometrogram	Impaired bladder function	D
Myelogram	Significant spinal cord pressure	D
Physical examination: rectal	Impairment of sphincter tone	D

Disability test	Test result	Disability classification
Physical examination	Multi-level neurologic compromise	D
Physical examination: lower limb	Lower extremity weakness or significant spasticity	D
BODY PART: CE SPINE JOB TITLE: MACHINIST		
Cervical disc disease with myelopathy:		
Computerized axial tomography	Significant spinal cord pressure	D
Magnetic resonance imaging	Significant spinal cord pressure	D
Myelogram	Significant spinal cord pressure	D
Cystometrogram	Impaired bladder function	D
Physical examination: rectal	Impairment of sphincter tone	D
Physical examination: lower limb	Lower extremity weakness or significant spasticity	D
Physical examination	Multi-level neurologic compromise	D
Chronic herniated disc:		
Physical examination	Multi-level neurologic compromise	D
Cervical spondylolysis:		
Physical examination	Multi-level neurologic compromise	D
Cervical intervertebral disc degeneration:		
Physical examination	Multi-level neurologic compromise	D
Fracture: posterior element with spinal canal displacement:		
Physical examination	Multi-level neurologic compromise	D
Post laminectomy syndrome:		
Physical examination	Multi-level neurologic compromise	D
Cervical radiculopathy:		
Physical examination	Multi-level neurologic compromise	D
Spondylogenic compression of spinal cord:		
Computerized axial tomography	Significant spinal cord pressure	D
Magnetic resonance imaging	Significant spinal cord pressure	D
Cystometrogram	Impaired bladder function	D
Myelogram	Significant spinal cord pressure	D
Physical examination: rectal	Impairment of sphincter tone	D
Physical examination	Multi-level neurologic compromise	D
Physical examination: lower limb	Lower extremity weakness or significant spasticity	D
BODY PART: CE SPINE JOB TITLE: SHOP LABORER		
Cervical disc disease with myelopathy:		
Computerized axial tomography	Significant spinal cord pressure	D
Magnetic resonance imaging	Significant spinal cord pressure	D
Myelogram	Significant spinal cord pressure	D
Cystometrogram	Impaired bladder function	D
Physical examination: rectal	Impairment of sphincter tone	D
Physical examination: lower limb	Lower extremity weakness or significant spasticity	D
Physical examination	Multi-level neurologic compromise	D
Chronic herniated disc:		
Physical examination	Multi-level neurologic compromise	D
Cervical spondylolysis:		
Physical examination	Multi-level neurologic compromise	D
Cervical intervertebral disc degeneration:		
Physical examination	Multi-level neurologic compromise	D
Fracture: posterior element with spinal canal displacement:		
Physical examination	Multi-level neurologic compromise	D
Post laminectomy syndrome:		
Physical examination	Multi-level neurologic compromise	D
Cervical radiculopathy:		
Physical examination	Multi-level neurologic compromise	D
Spondylogenic compression of spinal cord:		
Computerized axial tomography	Significant spinal cord pressure	D
Magnetic resonance imaging	Significant spinal cord pressure	D
Cystometrogram	Impaired bladder function	D
Myelogram	Significant spinal cord pressure	D
Physical examination: rectal	Impairment of sphincter tone	D
Physical examination	Multi-level neurologic compromise	D
Physical examination: lower limb	Lower extremity weakness or significant spasticity	D

Disability test	Test result	Disability classification
BODY PART: CE SPINE JOB TITLE: SALES REPRESENTATIVE		
Cervical disc disease with myelopathy:		
Cystometrogram	Impaired bladder function	D
Physical examination: rectal	Impairment of sphincter tone	D
Spondylogenic compression of spinal cord:		
Cystometrogram	Impaired bladder function	D
Physical examination: rectal	Impairment of sphincter tone	D
BODY PART: CE SPINE JOB TITLE: GENERAL OFFICE CLERK		
Cervical disc disease with myelopathy:		
Cystometrogram	Impaired bladder function	D
Physical examination: rectal	Impairment of sphincter tone	D
Spondylogenic compression of spinal cord:		
Cystometrogram	Impaired bladder function	D
Physical examination: rectal	Impairment of sphincter tone	D

G. Shoulder and Elbow

Confirmatory test	Minimum result	Requirements.
BODY PART: SHOULDER AND ELBOW CONFIRMATORY TESTS		
Arthritis, acromioclavicular:		
X-ray: shoulder	Significant degenerative changes of joint	Recommended.
Computerized tomography	Significant degenerative changes of joint	Recommended.
Magnetic resonance imaging	Significant degenerative changes of joint	Recommended.
Arthritis, glenohumeral:		
X-ray: shoulder	Significant degenerative changes of joint	Recommended.
Computerized tomography	Significant degenerative changes of joint	Recommended.
Magnetic resonance imaging	Significant degenerative changes of joint	Recommended.
Rotator cuff tear:		
Computerized tomography	Tear of rotator cuff	Recommended.
Magnetic resonance imaging	Tear of rotator cuff	Recommended.
Medical diagnosis leading to a permanent functional limitation of the elbow:		
Medical record review	Condition with permanent functional limitation	Highly recommended.
X-ray: elbow	Imaging confirmation of functional diagnosis	Recommended.
Magnetic resonance imaging	Imaging confirmation of functional diagnosis	Recommended.

Disability test	Test result	Disability classification
BODY PART: SHOULDER AND ELBOW JOB TITLE: TRAINMAN		
Arthritis, acromioclavicular:		
Physical examination -- range of motion	<40 degrees flexion	D
Physical examination -- range of motion	<40 degrees abduction	D
Arthritis, glenohumeral:		
Physical examination -- range of motion	<40 degrees flexion	D
Physical examination -- range of motion	<40 degrees abduction	D
Rotator cuff tear:		
Physical examination -- range of motion	<40 degrees flexion	D
Physical examination -- range of motion	<40 degrees abduction	D
Permanent functional limitation, elbow:		
Physical examination	>40 degrees deviation	D
Physical examination -- range of motion	Flexion limit to 60 degrees	D
BODY PART: SHOULDER AND ELBOW JOB TITLE: ENGINEER		
Arthritis, acromioclavicular:		
Physical examination -- range of motion	<40 degrees flexion	D
Physical examination -- range of motion	<40 degrees abduction	D

Disability test	Test result	Disability classification
Arthritis, glenohumeral:		
Physical examination -- range of motion	<40 degrees flexion	D
Physical examination -- range of motion	<40 degrees abduction	D
Rotator cuff tear:		
Physical examination -- range of motion	<40 degrees flexion	D
Physical examination -- range of moiton	<40 degrees abduction	D
Permanent functional limitation, elbow:		
Physical examination	>40 degrees deviation	D
Physical examination -- range of motion	Flexion limit to 60 degrees	D
BODY PART: SHOULDER AND ELBOW JOB TITLE: CARMAN		
Arthritis, acromioclavicular:		
Physical examination -- range of motion	<40 degrees flexion	D
Physical examination -- range of motion	<40 degrees abduction	D
Arthritis, glenohumeral:		
Physical examination -- range of motion	<40 degrees flexion	D
Physical examination -- range of motion	<40 degrees abduction	D
Rotator cuff tear:		
Physical examination -- range of motion	<40 degrees flexion	D
Physical examination -- range of motion	<40 degrees abduction	D
Permanent functional limitation, elbow:		
Physical examination	>40 degrees deviation	D
Physical examination -- range of motion	Flexion limit to 60 degrees	D
BODY PART: SHOULDER AND ELBOW JOB TITLE: SIGNALMAN		
Arthritis, acromioclavicular:		
Physical examination -- range of motion	<40 degrees flexion	D
Physical examination -- range of motion	<40 degrees abduction	D
Arthritis, glenohumeral:		
Physical examination -- range of motion	<40 degrees flexion	D
Physical examination -- range of motion	<40 degrees abduction	D
Rotator cuff tear:		
Physical examination -- range of motion	<40 degrees flexion	D
Physical examination -- range of motion	<40 degrees abduction	D
Permanent functional limitation, elbow:		
Physical examination	>40 degrees deviation	D
Physical examination -- range of motion	Flexion limit to 60 degrees	D
BODY PART: SHOULDER AND ELBOW JOB TITLE: TRACKMAN		
Arthritis, acromioclavicular:		
Physical examination -- range of motion	<40 degrees flexion	D
Physical examination -- range of motion	<40 degrees abduction	D
Arthritis, glenohumeral:		
Physical examination -- range of motion	<40 degrees flexion	D
Physical examination -- range of motion	<40 degrees abduction	D
Rotator cuff tear:		
Physical examination -- range of motion	<40 degrees flexion	D
Physical examination -- range of motion	<40 degrees abduction	D
Permanent functional limitation, elbow:		
Physical examination	>40 degrees deviation	D
Physical examination -- range of motion	Flexion limit to 60 degrees	D
BODY PART: SHOULDER AND ELBOW JOB TITLE: MACHINIST		
Arthritis, acromioclavicular:		
Physical examination -- range of motion	<40 degrees flexion	D
Physical examination -- range of motion	<40 degrees abduction	D
Arthritis, glenohumeral:		
Physical examination -- range of motion	<40 degrees flexion	D
Physical examination -- range of motion	<40 degrees abduction	D
Rotator cuff tear:		
Physical examination -- range of motion	<40 degrees flexion	D
Physical examination -- range of motion	<40 degrees abduction	D
Permanent functional limitation, elbow:		
Physical examination	>40 degrees deviation	D

Disability test	Test result	Disability classification
Physical examination -- range of motion	Flexion limit to 60 degrees	D
BODY PART: SHOULDER AND ELBOW JOB TITLE: SHOP LABORER		
Arthritis, acromioclavicular:		
Physical examination -- range of motion	<40 degrees flexion	D
Physical examination -- range of motion	<40 degrees abduction	D
Arthritis, glenohumeral:		
Physical examination -- range of motion	<40 degrees flexion	D
Physical examination -- range of motion	<40 degrees abduction	D
Rotator cuff tear:		
Physical examination -- range of motion	<40 degrees flexion	D
Physical examination -- range of motion	<40 degrees abduction	D
Permanent functional limitation, elbow:		
Physical examination	>40 degrees deviation	D
Physical examination -- range of motion	Flexion limit to 60 degrees	D

H. Hand and Arm

Confirmatory test	Minimum result	Requirements
BODY PART: HAND AND ARM CONFIRMATORY TESTS		
Carpal tunnel syndrome:		
Medical record review	Pain, paresthesia and weakness in distribution median nerve.	Highly recommended.
Nerve conduction testing	Definite median nerve conduction slowing at wrist	Highly recommended.
Electromyography	Denervation in severe cases	Recommended.
Fracture: wrist:		
X-ray: wrist	Evidence of fracture	Highly recommended.
Hand: permanent functional limitation:		
Medical record review	Documentation of medical condition for permanent limitation.	Highly recommended.
Physical examination	Definite reproducible evidence of limitation	Highly recommended.
Imaging study (e.g. X-ray, CAT, MRI)	Positive confirmation of underlying condition	Highly recommended.
Rheumatoid arthritis: hand:		
Rheumatoid factor	Titer of rheumatoid factor	Recommended.
Medical record review	History of objective findings including serological studies	Highly recommended.
X-ray: hand	Characteristic rheumatoid changes	Highly recommended.
Tenosynovitis:		
Medical record review	History of chronic tenosynovitis and objective findings	Highly recommended.
Physical examination	Definite evidence of tenosynovitis	Highly recommended.
Thumb: Permanent functional limitation:		
Medical record review	Documentation of medical condition for permanent limitation.	Highly recommended.
Physical examination	Definite reproducible evidence of limitation	Highly recommended.
Imaging study (X-ray, CAT, MRI)	Positive confirmation of underlying condition	Highly recommended.
Wrist: Permanent functional limitation:		
Medical record review	Documentation of medical condition for permanent limitation.	Highly recommended.
Physical examination	Definite reproducible evidence of limitation	Highly recommended.
Imaging study (e.g. X-ray, CAT, MRI)	Positive confirmation of underlying condition	Highly recommended.

Disability test	Test result	Disability classification
BODY PART: HAND AND ARM JOB TITLE: TRAINMAN		
Fracture, wrist:		
Physical examination -- range of motion	Extension -- limit to 30 degrees	D
Physical examination -- range of motion	Flexion -- limit to 30 degrees	D
Physical examination -- range of motion	Ankylosis: >20 degrees from neutral	D
Rheumatoid arthritis hand:		
Physical examination	Significant deformity	D
Medical record review	Significant flare-ups, under treatment with rheumatologist.	D

Disability test	Test result	Disability classification
Medical record review	Extensive medication use, under treatment with rheumatologist.	D
Thumb: permanent functional limitation:		
Adduction of thumb	Loss ≤4 cm	D
Ankylosis: degree from neutral	<20 degrees extension	D
Ankylosis: degree from neutral	<40 degrees flexion	D
Loss of extension or flexion	MCP or PIP: maximum flexion <40 degrees	D
Opposition	Loss ≤4 cm	D
Wrist: permanent functional limitation:.		
Physical examination -- range of motion	Extension -- limit to 30 degrees	D
Physical examination -- range of motion	Flexion -- limit to 30 degrees	D
Physical examination -- range of motion	Ankylosis: >20 degrees from neutral	D
BODY PART: HAND AND ARM JOB TITLE ENGINEER		
Fracture, wrist:		
Physical examination -- range of motion	Extension-limit to 30 degrees	D
Physical examination -- range of motion	Flexion-limit to 30 degrees	D
Physical examination -- range of motion	Ankylosis: >20 degrees from neutral	D
Rheumatoid arthritis hand:		
Physical examination	Significant deformity	D
Medical record review	Significant flare-ups, under treatment with rheumatologist.	D
Medical record review	Extensive medication use, under treatment with rheumatologist.	D
Thumb: permanent functional limitation:		
Adduction of thumb	Loss ≤4 cm	D
Ankylosis: degree from neutral	<20 degrees extension	D
Ankylosis: degree from neutral	<40 degrees flexion	D
Loss of extension or flexion	MCP or PIP: maximum flexion <40 degrees	D
Opposition	Loss ≤4 cm	D
Wrist: permanent functional limitation:		
Physical examination -- range of motion	Extension -- limit to 30 degrees	D
Physical examination -- range of motion	Flexion -- limit to 30 degrees	D
Physical examination -- range of motion	Ankylosis: >20 degrees from neutral	D
BODY PART: HAND AND ARM JOB TITLE: DISPATCHER		
Fracture, wrist:		
Physical examination -- range of motion	Extension -- limit to 30 degrees	D
Physical examination -- range of motion	Flexion -- limit to 30 degrees	D
Physical examination -- range of motion	Ankylosis: >20 degrees from neutral	D
Rheumatoid arthritis hand:		
Physical examination	Significant deformity	D
Medical record review	Significant flare-ups, under treatment with rheumatologist.	D
Medical record review	Extensive medication use, under treatment with rheumatologist.	D
Thumb: permanent functional limitation:		
Adduction of thumb	Loss ≤4 cm	D
Ankylosis: degree from neutral	<20 degrees extension	D
Ankylosis: degree from neutral	<40 degrees flexion	D
Loss of extension or flexion	MCP or PIP: maximum flexion <40 degrees	D
Opposition	Loss ≤4 cm	D
Wrist: permanent functional limitation:		
Physical examination -- range of motion	Extension -- limit to 30 degrees	D
Physical examination -- range of motion	Flexion -- limit to 30 degrees	D
Physical examination -- range of motion	Ankylosis: >20 degrees from neutral	D
BODY PART: HAND AND ARM JOB TITLE: CARMAN		
Fracture, wrist:		
Physical examination -- range of motion	Extension -- limit to 30 degrees	D
Physical examination -- range of motion	Flexion -- limit to 30 degrees	D
Physical examination -- range of motion	Ankylosis: >20 degrees from neutral	D
Rheumatoid arthritis hand:		
Physical examination	Significant deformity	D
Medical record review	Significant flare-ups, under treatment with rheumatologist.	D

Disability test	Test result	Disability classification
Medical record review	Extensive medication use, under treatment with rheumatologist.	D
Thumb: permanent functional limitation:		
Adduction of thumb:	Loss ≤4 cm	D
Ankylosis: degree from neutral	<20 degrees extension	D
Ankylosis: degree from neutral	<40 degrees flexion	D
Loss of extension or flexion	MCP of PIP: maximum flexion <40 degrees	D
Opposition	Loss ≤4 cm	D
Wrist: permanent functional limitation:		
Physical examination -- range of motion	Extension -- limit to 30 degrees	D
Physical examination -- range of motion	Flexion -- limit to 30 degrees	D
Physical examination -- range of motion	Ankylosis: >20 degrees from neutral	D
BODY PART: HAND AND ARM JOB TITLE: SIGNALMAN		
Fracture, wrist:		
Physical examination -- range of motion	Extension -- limit to 30 degrees	D
Physical examination -- range of motion	Flexion -- limit to 30 degrees	D
Physical examination -- range of motion	Ankylosis: >20 degrees from neutral	D
Rheumatoid arthritis hand:		
Physical examination	Significant deformity	D
Medical record review	Significant flare-ups, under treatment with rheumatologist.	D
Medical record review	Extensive medication use, under treatment with rheumatologist.	D
Thumb: permanent functional limitation:		
Adduction of thumb	Loss ≤4 cm	D
Ankylosis: degree from neutral	<20 degrees extension	D
Ankylosis: degree from neutral	<40 degrees flexion	D
Loss of extension or flexion	MCP or PIP: maximum flexion <40 degrees	D
Opposition	Loss ≤4 cm	D
Wrist: permanent functional limitation:		
Physical examination -- range of motion	Extension -- limit to 30 degrees	D
Physical examination -- range of motion	Flexion -- limit to 30 degrees	D
Physical examination -- range of motion	Ankylosis: >20 degrees from neutral	D
BODY PART: HAND AND ARM JOB TITLE: TRACKMAN		
Fracture, wrist:		
Physical examination -- range of motion	Extension -- limit to 30 degrees	D
Physical examination -- range of motion	Flexion --limit to 30 degrees	D
Physical examination -- range of motion	Ankylosis: >20 degrees from neutral	D
Rheumatoid arthritis hand:		
Physical examination	Significant deformity	D
Medical record review	Significant flare-ups, under treatment with rheumatologist.	D
Medical record review	Extensive medication use, under treatment with rheumatologist.	D
Thumb: permanent functional limitation:		
Adduction of thumb	Loss ≤4 cm	D
Ankylosis: degree from neutral	<20 degrees extension	D
Ankylosis: degree from neutral	<40 degrees flexion	D
Loss of extension or flexion	MCP or PIP: maximum flexion <40 degrees	D
Opposition	Loss ≤4 cm	D
Wrist: permanent functional limitation:		
Physical examination -- range of motion	Extension -- -- limit to 30 degrees	D
Physical examination -- range of motion	Flexion -- limit to 30 degrees	D
Physical examination -- range of motion	Ankylosis: >20 degrees from neutral	D
BODY PART: HAND AND ARM JOB TITLE: MACHINIST		
Fracture, wrist:		
Physical examination -- range of motion	Extension -- limit to 30 degrees	D
Physical examination -- range of motion	Flexion -- limit to 30 degrees	D
Physical examination -- range of motion	Ankylosis: >20 degrees from neutral	D
Rheumatoid arthritis hand:		
Physical examination	Significant deformity	D
Medical record review	Significant flare-ups, under treatment with rheumatologist.	D

Disability test	Test result	Disability classification
Medical record review	Extensive medication use, under treatment with rheumatologist.	D
Thumb: permanent functional limitation:		
Adduction of thumb	Loss ≤4 cm	D
Ankylosis: degree from neutral	<20 degrees extension	D
Ankylosis: degree from neutral	<40 degrees flexion	D
Loss of extension or flexion	MCP or PIP: maximum flexion <40 degrees	D
Opposition	Loss ≤4 cm	D
Wrist: permanent functional limitation:		
Physical examination -- range of motion	Extension -- limit to 30 degrees	D
Physical examination -- range of motion	Flexion -- limit to 30 degrees	D
Physical examination -- range of motion	Ankylosis: >20 degrees from neutral	D
BODY PART: HAND AND ARM JOB TITLE: SHOP LABORER		
Fracture, wrist:		
Physical examination -- range of motion	Extension -- limit to 30 degrees	D
Physical examination -- range of motion	Flexion -- limit to 30 degrees	D
Physical examination -- range of motion	Ankylosis: >20 degrees from neutral	D
Rheumatoid arthritis hand:		
Physical examination	Significant deformity	D
Medical record review	Significant flare-ups, under treatment with rheumatologist.	D
Medical record review	Extensive medication use, under treatment with rheumatologist.	D
Thumb: permanent functional limitation:		
Adduction of thumb	Loss ≤4 cm	D
Ankylosis: degree from neutral	<20 degrees extension	D
Ankylosis: degree from neutral	<40 degrees flexion	D
Loss of extension or flexion	MCP or PIP: maximum flexion <40 degrees	D
Opposition	Loss ≤4 cm	D
Wrist: permanent functional limitation:		
Physical examination -- range of motion	Extension -- limit to 30 degrees	D
Physical examination -- range of motion	Flexion -- limit to 30 degrees	D
Physical examination -- range of motion	Ankylosis: >20 degrees from neutral	D
BODY PART: HAND AND ARM JOB TITLE: SALES REPRESENTATIVE		
Fracture, wrist:		
Physical examination -- range of motion	Extension -- limit to 30 degrees	D
Physical examination -- range of motion	Flexion -- limit to 30 degrees	D
Physical examination -- range of motion	Ankylosis: >20 degrees from neutral	D
Rheumatoid arthritis hand:		
Physical examination	Significant deformity	D
Medical record review	Significant flare-ups, under treatment with rheumatologist.	D
Medical record review	Extensive medication use, under treatment with rheumatologist.	D
Thumb: permanent functional limitation:		
Adduction of thumb	Loss ≤4 cm	D
Ankylosis: degree from neutral	<20 degrees extension	D
Ankylosis: degree from neutral	<40 degrees flexion	D
Loss of extension or flexion	MCP or PIP: maximum flexion <40 degrees	D
Opposition	Loss ≤4 cm	D
Wrist: permanent functional limitation:		
Physical examination -- range of motion	Extension -- limit to 30 degrees	D
Physical examination -- range of motion	Flexion -- limit to 30 degrees	D
Physical examination -- range of motion	Ankylosis: >20 degrees from neutral	D
BODY PART: HAND AND ARM JOB TITLE: GENERAL OFFICE CLERK		
Fracture, wrist:		
Physical examination -- range of motion	Extension -- limit to 30 degrees	D
Physical examination -- range of motion	Flexion -- limit to 30 degrees	D
Physical examination -- range of motion	Ankylosis: >20 degrees from neutral	D
Rheumatoid arthritis hand:		
Physical examination	Significant deformity	D
Medical record review	Significant flare-ups, under treatment with rheumatologist.	D

Disability test	Test result	Disability classification
Medical record review	Extensive medication use, under treatment with rheumatologist.	D
Thumb: permanent functional limitation:		
Adduction of thumb	Loss ≤4 cm	D
Ankylosis: degree from neutral	<20 degree extension	D
Ankylosis: degree from neutral	<40 degree flexion	D
Loss of extension or flexion	MCP or PIP: maximum flexion <40 degrees	D
Opposition	Loss ≤4 cm	D
Wrist: permanent functional limitation:		
Physical examination -- range of motion	Extension -- limit to 30 degrees	D
Physical examination -- range of motion	Flexion -- limit to 30 degrees	D
Physical examination -- range of motion	Ankylosis: >20 degrees from neutral	D

I. Hip

Confirmatory test	Minimum result	Requirements
BODY PART: HIP CONFIRMATORY TESTS		
Ankylosis, hip:		
X-ray: hip	Extreme joint destruction	Highly Recommended.
Physical examination -- range of motion	No mobility	Highly Recommended.
Osteoarthritis, hip:		
X-ray: hip	<4 mm joint space, or other positive evidence	Recommended.
Magnetic resonance imaging	<4 mm joint space, or other positive evidence	Recommended.
Computerized axial tomography	<4 mm joint space, or other positive evidence	Recommended.
Osteomyelitis, hip:		
X-ray: hip	Evidence of chronic infection	Recommended.
Computerized axial tomography	Evidence of chronic infection	Recommended.
Paget's disease:		
X-ray: hip	Osteolytic or blastic lesions	Highly Recommended.
Alkaline phosphatase	Increased up to 50 times	Highly Recommended.
Hip replacement surgery:		
X-ray: hip	Evidence of artificial hip	Recommended.
Medical record review	Documentation of prior hip replacement	Recommended.

Disability test	Test result	Disability classification
BODY PART: HIP JOB TITLE: TRAINMAN		
Ankylosis, hip:		
Physical examination -- range of motion	Ankylosis 5 degrees or >flexion	D
Physical examination -- range of motion	Ankylosis internal rotation >5 degrees	D
Physical examination -- range of motion	Ankylosis external rotation >10 degrees	D
Physical examination -- range of motion	Ankylosis in abduction >5 degrees	D
Physical examination -- range of motion	Ankylosis in adduction >5 degrees	D
Osteoarthritis, hip:		
X-ray: hip	0 mm cartilage interval	D
Physical examination -- range of motion	30 degrees flexion contracture	D
Physical examination -- range of motion	<50 degrees flexion	D
Physical examination -- range of motion	<5 degrees abduction	D
Osteomyelitis, chronic hip:		
X-ray: hip	Significant joint destruction	D
Physical examination -- range of motion	30 degrees flexion contracture	D
Physical examination -- range of motion	<50 degrees flexion	D
Physical examination -- range of motion	<5 degrees abduction	D
Medical record review	Documented occurrence of recurring infections with treatment.	D
Paget's disease:		
X-ray: hip	Significant joint destruction	D
Physical examination -- range of motion	30 degrees flexion contracture	D
Physical examination -- range of motion	<50 degrees flexion	D
Physical examination -- range of motion	<5 degrees abduction	D
Hip replacement surgery:		
X-ray: hip	Evidence of artificial hip joint	D
Medical record review	Documentation of prior hip replacement	D

Disability test	Test result	Disability classification
BODY PART: HIP JOB TITLE: ENGINEER		
Ankylosis, hip:		
Physical examination -- range of motion	Ankylosis 5 degrees or >flexion	D
Physical examination -- range of motion	Ankylosis internal rotation >5 degrees	D
Physical examination -- range of motion	Ankylosis external rotation >10 degrees	D
Physical examination -- range of motion	Ankylosis in abduction >5 degrees	D
Physical examination -- range of motion	Ankylosis in adduction >5 degrees	D
Osteoarthritis, hip:		
X-ray: hip	0 mm cartilage interval	D
Physical examination -- range of motion	30 degrees flexion contracture	D
Physical examination -- range of motion	<50 degrees flexion	D
Physical examination -- range of motion	<5 degrees abduction	D
Osteomyelitis, chronic hip:		
X-ray: hip	Signficant joint destruction	D
Physical examination -- range of motion	30 degrees flexion contracture	D
Physical examination -- range of motion	<50 degrees flexion	D
Physical examination -- range of motion	<5 degrees abduction	D
Medical record review	Documented occurrence of recurring infections with treatment.	D
Paget's disease:		
X-ray: hip	Significant joint destruction	D
Physical examination -- range of motion	30 degrees flexion contracture	D
Physical examination -- range of motion	<50 degrees flexion	D
Physical examination -- range of motion	<5 degrees abduction	D
Hip replacement surgery:		
X-ray: hip	Evidence of artificial hip joint	D
Medical record review	Documentation of prior hip replacement	D
BODY PART: HIP JOB TITLE: CARMAN		
Ankylosis, hip:		
Physical examination -- range of motion	Ankylosis 5 degrees or >flexion	D
Physical examination -- range of motion	Ankylosis internal rotation >5 degrees	D
Physical examination -- range of motion	Ankylosis external rotation >10 degrees	D
Physical examination -- range of motion	Ankylosis in abduction >5 degrees	D
Physical examination -- range of motion	Ankylosis in adduction >5 degrees	D
Osteoarthritis, hip:		
X-ray: hip	0 mm cartilage interval	D
Physical examination -- range of motion	30 degrees flexion contracture	D
Physical examination -- range of motion	<50 degrees flexion	D
Physical examination -- range of motion	<5 degrees abduction	D
Osteomyelitis, chronic hip:		
X-ray: hip	Significant joint destruction	D
Physical examination -- range of motion	30 degrees flexion contracture	D
Physical examination -- range of motion	<50 degrees flexion	D
Physical examination -- range of motion	<5 degrees abduction	D
Medical record review	Documented occurrence of recurring infections with treatment.	D
Paget's disease:		
X-ray: hip	Significant joint destruction	D
Physical examination -- range of motion	30 degrees flexion contracture	D
Physical examination -- range of motion	<50 degrees flexion	D
Physical examination -- range of motion	<5 degrees abduction	D
Hip replacement surgery:		
X-ray: hip	Evidence of artificial hip joint	D
Medical record review	Documentation of prior hip replacement	D
BODY PART: HIP JOB TITLE: SIGNALMAN		
Ankylosis, hip:		
Physical examination -- range of motion	Ankylosis 5 degrees or >flexion	D
Physical examination -- range of motion	Ankylosis internal rotation >5 degrees	D
Physical examination -- range of motion	Ankylosis external rotation >10 degrees	D
Physical examination -- range of motion	Ankylosis in abduction >5 degrees	D
Physical examination -- range of motion	Ankylosis in adduction >5 degrees	D
Osteoarthritis, hip:		
X-ray: hip	0 mm cartilage interval	D
Physical examination -- range of motion	30 degrees flexion contracture	D

Disability test	Test result	Disability classification
Physical examination -- range of motion	<50 degrees flexion	D
Physical examination -- range of motion	<5 degrees abduction	D
Osteomyelitis, chronic hip:		
X-ray: hip	Significant joint destruction	D
Physical examination -- range of motion	30 degrees flexion contracture	D
Physical examination -- range of motion	<50 degrees flexion	D
Physical examination -- range of motion	<5 degrees abduction	D
Medical record review	Documented occurrence of recurring infections with treatment.	D
Paget's disease:		
X-ray: hip	Significant joint destruction	D
Physical examination -- range of motion	30 degrees flexion contracture	D
Physical examination -- range of motion	<50 degrees flexion	D
Physical examination -- range of motion	<5 degrees abduction	D
Hip replacement surgery:		
X-ray: hip	Evidence of artificial hip joint	D
Medical record review	Documentation of prior hip replacement	D
BODY PART: HIP JOB TITLE: TRACKMAN		
Ankylosis, hip:		
Physical examination -- range of motion	Ankylosis 5 degrees or >flexion	D
Physical examination -- range of motion	Ankylosis internal rotation >5 degrees	D
Physical examination -- range of motion	Ankylosis external rotation >10 degrees	D
Physical examination -- range of motion	Ankylosis in abduction >5 degrees	D
Physical examination -- range of motion	Ankylosis in adduction >5 degrees	D
Osteoarthritis, hip:		
X-ray: hip	0 mm cartilage interval	D
Physical examination -- range of motion	30 degrees flexion contracture	D
Physical examination -- range of motion	<50 degrees flexion	D
Physical examination -- range of motion	<5 degrees abduction	D
Osteomyelitis, chronic hip:		
X-ray: hip	Significant joint destruction	D
Physical examination -- range of motion	30 degrees flexion contracture	D
Physical examination -- range of motion	<50 degrees flexion	D
Physical examination -- range of motion	<5 degrees abduction	D
Medical record review	Documented occurrence of recurring infections with treatment.	D
Paget's disease:		
X-ray: hip	Significant joint destruction	D
Physical examination -- range of motion	30 degrees flexion contracture	D
Physical examination -- range of motion	<50 degrees flexion	D
Physical examination -- range of motion	<5 degrees abduction	D
Hip replacement surgery:		
X-ray: hip	Evidence of artificial hip joint	D
Medical record review	Documentation of prior hip replacement	D
BODY PART: HIP JOB TITLE: MACHINIST		
Ankylosis, hip:		
Physical examination -- range of motion	Ankylosis 5 degrees or >flexion	D
Physical examination -- range of motion	Ankylosis internal rotation >5 degrees	D
Physical examination -- range of motion	Ankylosis external rotation >10 degrees	D
Physical examination -- range of motion	Ankylosis in abduction >5 degrees	D
Physical examination -- range of motion	Ankylosis in adduction >5 degrees	D
Osteoarthritis, hip:		
X-ray: hip	0 mm cartilage interval	D
Physical examination -- range of motion	30 degrees flexion contracture	D
Physical examination -- range of motion	<50 degrees flexion	D
Physical examination -- range of motion	<5 degrees abduction	D
Osteomyelitis, chronic hip:		
X-ray: hip	Significant joint destruction	D
Physical examination -- range of motion	30 degrees flexion contracture	D
Physical examination -- range of motion	<50 degrees flexion	D
Physical examination -- range of motion	<5 degrees abduction	D
Medical record review	Documented occurrence of recurring infections with treatment.	D
Paget's disease:		
X-ray: hip	Significant joint destruction	D
Physical examination -- range of motion	30 degrees flexion contracture	D

Disability test	Test result	Disability classification
Physical examination -- range of motion	<50 degrees flexion	D
Physical examination -- range of motion	<5 degrees abudction	D
Hip replacement surgery:		
X-ray: hip	Evidence of artificial hip joint	D
Medical record review	Documentation of prior hip replacement	D
BODY PART: HIP JOB TITLE: SHOP LABORER		
Ankylosis, hip:		
Physical examination -- range of motion	Ankylosis 5 degrees of >flexion	D
Physical examination -- range of motion	Ankylosis internal rotation >5 degrees	D
Physical examination -- range of motion	Ankylosis external rotation >10 degrees	D
Physical examination -- range of motion	Ankylosis in abduction >5 degrees	D
Physical examination -- range of motion	Ankylosis in adduction >5 degrees	D
Osteoarthritis, hip:		
X-ray: hip	0 mm cartilage interval	D
Physical examination -- range of motion	30 degrees flexion contracture	D
Physical examination -- range of motion	<50 degrees flexion	D
Physical examination -- range of motion	<5 degrees abduction	D
Osteomyelitis, chronic hip:		
X-ray: hip	Significant joint destruction	D
Physical examination -- range of motion	30 degrees flexion contracture	D
Physical examination -- range of motion	<50 degrees flexion	D
Physical examination -- range of motion	<5 degrees abduction	D
Medical record review	Documented occurrence of recurring infections with treatment.	D
Paget's disease:		
X-ray; hip	Significant joint destruction	D
Physical examination -- range of motion	30 degrees flexion contracture	D
Physical examination -- range of motion	<50 degrees flexion	D
Physical examination -- range of motion	<5 degrees abduction	D
Hip replacement surgery:		
X-ray: hip	Evidence of artificial hip joint	D
Medical record review	Documentation of prior hip replacement	D

J. Knee

Confirmatory test	Minimum result	Requirements
BODY PART: KNEE CONFIRMATORY TESTS		
Arthritis: knee:		
X-ray: knee	Evidence of significant degenerative changes	Recommended.
Collateral ligament tear with laxity:		
Physical examination: knee	Evidence of ligamentous laxity	Highly Recommended.
Magnetic resonance imaging	Evidence of ligamentous tear	Recommended.
Cruciate and collateral ligament tear with laxity:		
Magnetic resonance imaging	Tear of both ligaments	Recommended.
Physical examination	Evidence of ligamentous laxity	Highly Recommended.
Medical record review	Documentation of tear by arthroscopy	Recommended.
Cruciate ligament tear with laxity:		
Physical examination: knee	Evidence of ligamentous laxity	Highly Recommended.
Magnetic resonance imaging	Evidence of cruciate tear	Recommended.
Medical record review	Documentation of tear by arthroscopy	Recommended.
Intercondylar fracture:		
X-ray: knee	Evidence of fracture	Highly Recommended.
Osteomyelitis: knee:		
Medical record review	Documented history of osteomyelitis requiring treatment	Highly Recommended.
X-ray: knee	Evidence of chronic infection	Recommended.
Computerized tomography	Evidence of chronic infection	Recommended.
Magnetic resonance imaging	Evidence of chronic infection	Recommended.
Osteonecrosis:		
X-ray: knee	Necrosis of femoral condyle or tibial plateau	Recommended.
Computerized tomography	Necrosis of femoral condyle or tibial plateau	Recommended.
Magnetic resonance imaging	Necrosis of femoral condyle or tibial plateau	Recommended.
Patellofemoral arthritis:		
X-ray: knee	Evidence of arthritis	Recommended.
Magnetic resonance imaging	Evidence of arthritis	Recommended.
Physical examination	Crepitation with movement	Highly Recommended.

J. Knee—Continued

Confirmatory test	Minimum result	Requirements
Patellar fracture nonunion with displacement:		
X-ray: knee	Nonunion and displacement	Recommended.
Magnetic resonance imaging	Nonunion and displacement	Recommended.
Computerized tomography	Nonunion and displacement	Recommended.
Plateau fracture:		
X-ray: knee	Evidence of fracture	Recommended.
Computerized tomography	Evidence of fracture	Recommended.
Magnetic resonance imaging	Evidence of fracture	Recommended.
Meniscectomy -- medial or lateral:		
Medical record review	History of surgery	Highly Recommended.
Patellectomy:		
Physical examination: knee	Absent patella	Highly Recommended.
Patellar -- subluxation -- recurrent:		
Medical record review	History of recurrent subluxation	Highly Recommended.
Supracondylar fracture:		
X-ray: knee	Evidence of fracture	Recommended.
Magnetic resonance imaging	Evidence of fracture	Recommended.
Computerized tomography	Evidence of fracture	Recommended.
Total knee replacement:		
X-ray: knee	Presence of replacement knee	Recommended.
Medical record review	Documented surgical history	Recommended.
Tibial shaft fracture:		
X-ray: leg	Fracture of shaft	Recommended.
Magnetic resonance imaging	Evidence of fracture	Recommended.
Computerized tomography	Evidence of fracture	Recommended.

Disability test	Test result	Disability classification
BODY PART: KNEE JOB TITLE: TRAINMAN		
Arthritis knee:		
Physical examination -- range of motion	Range of motion: flexion <60 degrees	D
Physical examination -- range of motion	Flexion contracture (20 or > degrees)	D
Physical examination	Valgus deformity, 16 - 20 degrees	D
Physical examination	Varus deformity, 8 - 12 degrees	D
X-ray knee	0 - 1 mm cartilage interval with degenerative change	D
Meniscectomy, medial or lateral:		
Physical examination -- range of motion	Range of motion: flexion <60 degrees	D
Physical examination -- range of motion	Flexion contracture (20 or >degrees)	D
Collateral ligament tear with laxity:		
Physical examination -- range of motion	Range of motion: flexion <60 degrees	D
Physical examination -- range of motion	Flexion contracture (20 or > degrees)	D
Cruciate and collateral ligament tear:		
Physical examination -- range of motion	Range of motion: flexion <60 degrees	D
Physical examination -- range of motion	Flexion contracture (20 or > degrees)	D
Cruciate ligament tear with laxity:		
Physical examination -- range of motion	Range of motion: flexion <60 degrees	D
Physical examination -- range of motion	Flexion contracture (20 or > degrees)	D
Intercondylar fracture:		
Post fracture angulation	>20 degrees angulation	D
Physical examination -- range of motion	Range of motion: flexion <60 degrees	D
Physical examination -- range of motion	Flexion contracture (20 or > degrees)	D
Osteomyelitis, chronic knee:		
Physical examination -- range of motion	Range of motion: flexion <60 degrees	D
Physical examination -- range of motion	Flexion contracture (20 or > degrees)	D
Physical examination	Valgus deformity, 16 - 20 degrees	D
Physical examination	Varus deformity, 8 - 12 degrees	D
Medical record review	Frequent episodes of infection requiring treatment	D
X-ray knee	0 - 1 mm cartilage interval with degenerative change	D
Osteonecrosis:		
Physical examination -- range of motion	Range of motion: flexion <60 degrees	D
Physical examination -- range of motion	Flexion contracture (20 or > degrees)	D
Physical examination	Valgus deformity, 16 - 20 degrees	D
Physical examination	Varus deformity, 8 - 12 degrees	D
X-ray knee	0 - 1 mm cartilage interval with degenerative change	D
Patellofemoral arthritis:		
Physical examination -- range of motion	Range of motion: flexion <60 degrees	D
Physical examination -- range of motion	Flexion contracture (20 or > degrees)	D

Disability test	Test result	Disability classification
Physical examination	Valgus deformity, 16 - 20 degrees	D
Physical examination	Varus deformity, 8 - 12 degrees	D
X-ray knee: patello femoral joint	0 mm cartilage interval with degenerative change	D
Patellar fracture nonunion with displacement:		
Physical examination -- range of motion	Range of motion: flexion <60 degrees	D
Physical examination -- range of motion	Flexion contracture (20 or > degrees)	D
X-ray knee	Nonunion and >3 mm displacement	D
Plateau fracture:		
Post fracture angulation	>20 degrees angulation	D
Physical examination -- range of motion	Range of motion: flexion <60 degrees	D
Physical examination -- range of motion	Flexion contracture (20 or > degrees)	D
Patellectomy:		
Physical examination -- range of motion	Range of motion: flexion <60 degrees	D
Physical examination -- range of motion	Flexion contracture (20 or > degrees)	D
Patellar, subluxation, recurrent:		
Physical examination -- range of motion	Range of motion: flexion <60 degrees	D
Physical examination -- range of motion	Flexion contracture (20 or > degrees)	D
Supracondylar fracture:		
Post fracture angulation	>20 degrees angulation	D
Physical examination -- range of motion	Range of motion: flexion <60 degrees	D
Physical examination -- range of motion	Flexion contracture (20 or > degrees)	D
Tibial shaft fracture:		
Physical examination -- range of motion	Range of motion: flexion <60 degrees	D
Physical examination -- range of motion	Flexion contracture (20 or > degrees)	D
Post fracture angulation	>20 degrees malalignment	D
BODY PART: KNEE JOB TITLE: ENGINEER		
Arthritis knee:		
Physical examination -- range of motion	Range of motion: flexion <60 degrees	D
Physical examination -- range of motion	Flexion contracture (20 or > degrees)	D
Physical examination	Valgus deformity, 16 - 20 degrees	D
Physical examination	Varus deformity, 8 - 12 degrees	D
X-ray knee	0 - 1 mm cartilage interval with degenerative change	D
Meniscectomy, medial or lateral:		
Physical examination -- range of motion	Range of motion: flexion <60 degrees	D
Physical examination -- range of motion	Flexion contracture (20 or > degrees)	D
Collateral ligament tear with laxity:		
Physical examination -- range of motion	Range of motion: flexion <60 degrees	D
Physical examination -- range of motion	Flexion contracture (20 or > degrees)	D
Cruciate and collateral ligament tear:		
Physical examination -- range of motion	Range of motion: flexion <60 degrees	D
Physical examination -- range of motion	Flexion contracture (20 or > degrees)	D
Cruciate ligament tear with laxity:		
Physical examination -- range of motion	Range of motion: flexion <60 degrees	D
Physical examination -- range of motion	Flexion contracture (20 or > degrees)	D
Intercondylar fracture:		
Post fracture angulation	>20 degrees angulation	D
Physical examination -- range of motion	Range of motion: flexion <60 degrees	D
Physical examination -- range of motion	Flexion contracture (20 or > degrees)	D
Osteomyelitis, chronic knee:		
Physical examination -- range of motion	Range of motion: flexion <60 degrees	D
Physical examination -- range of motion	Flexion contracture (20 or > degrees)	D
Physical examination	Valgus deformity, 16 - 20 degrees	D
Physical examination	Varus deformity, 8 - 12 degrees	D
Medical record review	Frequent episodes of infection requiring treatment	D
X-ray knee	0 - 1 mm cartilage interval with degenerative change	D
Osteonecrosis:		
Physical examination -- range of motion	Range of motion: flexion <60 degrees	D
Physical examination -- range of motion	Flexion contracture (20 or > degrees)	D
Physical examination	Valgus deformity, 16 - 20 degrees	D
Physical examination	Varus deformity, 8 - 12 degrees	D
X-ray knee	0 - 1 mm cartilage interval with degenerative change	D
Patellofemoral arthritis:		
Physical examination -- range of motion	Range of motion: flexion <60 degrees	D
Physical examination -- range of motion	Flexion contracture (20 or > degrees)	D
Physical examination	Valgus deformity, 16 - 20 degrees	D
Physical examination	Varus deformity, 8 - 12 degrees	D
X-ray knee: patello femoral joint	0 mm cartilage interval with degenerative change	D
Patellar fracture nonunion with displacement:		
Physical examination -- range of motion	Range of motion: flexion <60 degrees	D

Disability test	Test result	Disability classification
Physical examination -- range of motion	Flexion contracture (20 or > degrees)	D
X-ray knee	Nonunion and >3 mm displacement	D
Plateau fracture:		
Post fracture angulation	>20 degrees angulation	D
Physical examination -- range of motion	Range of motion: flexion <60 degrees	D
Physical examination -- range of motion	Flexion contracture (20 or > degrees)	D
Patellectomy:		
Physical examination -- range of motion	Range of motion: flexion <60 degrees	D
Physical examination -- range of motion	Flexion contracture (20 or > degrees)	D
Patellar, subluxation, recurrent:		
Physical examination -- range of motion	Range of motion: flexion <60 degrees	D
Physical examination -- range of motion	Flexion contracture (20 or > degrees)	D
Supracondylar fracture:		
Post fracture angulation	>20 degrees angulation	D
Physical examination -- range of motion	Range of motion: flexion <60 degrees	D
Physical examination -- range of motion	Flexion contracture (20 or > degrees)	D
Tibial shaft fracture:		
Physical examination -- range of motion	Range of motion: flexion <60 degrees	D
Physical examination -- range of motion	Flexion contracture (20 or > degrees)	D
Post fracture angulation	>20 degrees malalignment	D
BODY PART: KNEE JOB TITLE: CARMAN		
Arthritis knee:		
Physical examination -- range of motion	Range of motion: flexion <60 degrees	D
Physical examination -- range of motion	Flexion contracture (20 or > degrees)	D
Physical examination	Valgus deformity, 16 - 20 degrees	D
Physical examination	Varus deformity, 8 - 12 degrees	D
X-ray knee	0 - 1 mm cartilage interval with degenerative change	D
Meniscectomy, medial or lateral:		
Physical examination -- range of motion	Range of motion: flexion <60 degrees	D
Physical examination -- range of motion	Flexion contracture (20 or > degrees)	D
Collateral ligament tear with laxity:		
Physical examination -- range of motion	Range of motion: flexion <60 degrees	D
Physical examination -- range of motion	Flexion contracture (20 or > degrees)	D
Cruciate and collateral ligament tear:.		
Physical examination -- range of motion	Range of motion: flexion <60 degrees	D
Physical examination -- range of motion	Flexion contracture (20 or > degrees)	D
Cruciate ligament tear with laxity:		
Physical examination -- range of motion	Range of motion: flexion <60 degrees	D
Physical examination -- range of motion	Flexion contracture (20 or > degrees)	D
Intercondylar fracture:		
Post fracture angulation	>20 degrees angulation	D
Physical examination -- range of motion	Range of motion: flexion <60 degrees	D
Physical examination -- range of motion	Flexion contracture (20 or > degrees)	D
Osteomyelitis, chronic knee:		
Physical examination -- range of motion	Range of motion: flexion <60 degrees	D
Physical examination -- range of motion	Flexion contracture (20 or > degrees)	D
Physical examination	Valgus deformity, 16 - 20 degrees	D
Physical examination	Varus deformity, 8 - 12 degrees	D
Medical record review	Frequent episodes of infection requiring treatment	D
X-ray knee	0 - 1 mm cartilage interval with degenerative change	D
Osteonecrosis:		
Physical examination -- range of motion	Range of motion: flexion <60 degrees	D
Physical examination -- range of motion	Flexion contracture (20 or > degrees)	D
Physical examination	Valgus deformity, 16 - 20 degrees	D
Physical examination	Varus deformity, 8 - 12 degrees	D
X-ray knee	0 - 1 mm cartilage interval with degenerative change	D
Patellofemoral arthritis:		
Physical examination -- range of motion	Range of motion: flexion <60 degrees	D
Physical examination -- range of motion	Flexion contracture (20 or > degrees)	D
Physical examination	Valgus deformity, 16 - 20 degrees	D
Physical examination	Varus deformity, 8 - 12 degrees	D
X-ray knee: patello femoral joint	0 mm cartilage interval with degenerative change	D
Patellar fracture nonunion with displacement:		
Physical examination -- range of motion	Range of motion: flexion <60 degrees	D
Physical examination -- range of motion	Flexion contracture (20 or > degrees)	D
X-ray knee	Nonunion and >3 mm displacement	D
Plateau fracture:		
Post fracture angulation	>20 degrees angulation	D
Physical examination -- range of motion	Range of motion: flexion <60 degrees	D

Disability test	Test result	Disability classification
Physical examination -- range of motion	Flexion contracture (20 or > degrees)	D
Patellectomy:		
Physical examination -- range of motion	Range of motion: flexion <60 degrees	D
Physical examination -- range of motion	Flexion contracture (20 or > degrees)	D
Patellar, subluxation, recurrent:		
Physical examination -- range of motion	Range of motion: flexion <60 degrees	D
Physical examination -- range of motion	Flexion contracture (20 or > degrees)	D
Supracondylar fracture:		
Post fracture angulation	>20 degrees angulation	D
Physical examination -- range of motion	Range of motion: flexion <60 degrees	D
Physical examination -- range of motion	Flexion contracture (20 or > degrees)	D
Tibial shaft fracture:		
Physical examination -- range of motion	Range of motion: flexion <60 degrees	D
Physical examination -- range of motion	Flexion contracture (20 or > degrees)	D
Post fracture angulation	>20 degrees malalignment	D
BODY PART: KNEE JOB TITLE: SIGNALMAN		
Arthritis knee:		
Physical examination -- range of motion	Range of motion: flexion <60 degrees	D
Physical examination -- range of motion	Flexion contracture (20 or > degrees)	D
Physical examination	Valgus deformity, 16 - 20 degrees	D
Physical examination	Varus deformity, 8 - 12 degrees	D
X-ray knee	0 - 1 mm cartilage interval with degenerative change	D
Meniscectomy, medial or lateral:		
Physical examination -- range of motion	Range of motion: flexion <60 degrees	D
Physical examination -- range of motion	Flexion contracture (20 or > degrees)	D
Collateral ligament tear with laxity:		
Physical examination -- range of motion	Range of motion: flexion <60 degrees	D
Physical examination -- range of motion	Flexion contracture (20 or > degrees)	D
Cruciate and collateral ligament tear:		
Physical examination -- range of motion	Range of motion: flexion <60 degrees	D
Physical examination -- range of motion	Flexion contracture (20 or > degrees)	D
Cruciate ligament tear with laxity:		
Physical examination -- range of motion	Range of motion: flexion <60 degrees	D
Physical examination -- range of motion	Flexion contracture (20 or > degrees)	D
Intercondylar fracture:		
Post fracture angulation	>20 degrees angulation	D
Physical examination -- range of motion	Range of motion: flexion <60 degrees	D
Physical examination -- range of motion	Flexion contracture (20 or > degrees)	D
Osteomyelitis, chronic knee:		
Physical examination -- range of motion	Range of motion: flexion <60 degrees	D
Physical examination -- range of motion	Flexion contracture (20 or > degrees)	D
Physical examination	Valgus deformity, 16 - 20 degrees	D
Physical examination	Varus deformity, 8 - 12 degrees	D
Medical record review	Frequent episodes of infection requiring treatment	D
X-ray knee	0 - 1 mm cartilage interval with degenerative change	D
Osteonecrosis:		
Physical examination -- range of motion	Range of motion: flexion <60 degrees	D
Physical examination -- range of motion	Flexion contracture (20 or > degrees)	D
Physical examination	Valgus deformity, 16 - 20 degrees	D
Physical examination	Varus deformity, 8 - 12 degrees	D
X-ray knee	0 - 1 mm cartilage interval with degenerative change	D
Patellofemoral arthritis:		
Physical examination -- range of motion	Range of motion: flexion <60 degrees	D
Physical examination -- range of motion	Flexion contracture (20 or > degrees)	D
Physical examination	Valgus deformity, 16 - 20 degrees	D
Physical examination	Varus deformity, 8 - 12 degrees	D
X-ray knee: patello femoral joint	0 mm cartilage interval with degenerative change	D
Patellar fracture nonunion with displacement:		
Physical examination -- range of motion	Range of motion: flexion <60 degrees	D
Physical examination -- range of motion	Flexion contracture (20 or > degrees)	D
X-ray knee	Nonunion and >3 mm displacement	D
Plateau fracture:		
Post fracture angulation	>20 degrees angulation	D
Physical examination -- range of motion	Range of motion: flexion <60 degrees	D
Physical examination -- range of motion	Flexion contracture (20 or > degrees)	D
Patellectomy:		
Physical examination -- range of motion	Range of motion: flexion <60 degrees	D
Physical examination -- range of motion	Flexion contracture (20 or > degrees)	D
Patellar, subluxation, recurrent:		
Physical examination -- range of motion	Range of motion: flexion <60 degrees	D

Disability test	Test result	Disability classification
Physical examination -- range of motion	Flexion contracture (20 or > degrees)	D
Supracondylar fracture:		
Post fracture angulation	>20 degrees angulation	D
Physical examination -- range of motion	Range of motion: flexion <60 degrees	D
Physical examination -- range of motion	Flexion contracture (20 or > degrees)	D
Tibial shaft fracture:		
Physical examination -- range of motion	Range of motion: flexion <60 degrees	D
Physical examination -- range of motion	Flexion contracture (20 or > degrees)	D
Post fracture angulation	>20 degrees malalignment	D
BODY PART: KNEE JOB TITLE: TRACKMAN		
Arthritis knee:		
Physical examination -- range of motion	Range of motion: flexion <60 degrees	D
Physical examination -- range of motion	Flexion contracture (20 or > degrees)	D
Physical examination	Valgus deformity, 16 - 20 degrees	D
Physical examination	Varus deformity, 8 - 12 degrees	D
X-ray knee	0 - 1 mm cartilage interval with degenerative change	D
Meniscectomy, medial or lateral:		
Physical examination -- range of motion	Range of motion: flexion <60 degrees	D
Physical examination -- range of motion	Flexion contracture (20 or > degrees)	D
Collateral ligament tear with laxity:		
Physical examination -- range of motion	Range of motion: flexion <60 degrees	D
Physical examination -- range of motion	Flexion contracture (20 or > degrees)	D
Cruciate and collateral ligament tear:		
Physical examination -- range of motion	Range of motion: flexion <60 degrees	D
Physical examination -- range of motion	Flexion contracture (20 or > degrees)	D
Cruciate ligament tear with laxity:		
Physical examination -- range of motion	Range of motion: flexion <60 degrees	D
Physical examination -- range of motion	Flexion contracture (20 or > degrees)	D
Intercondylar fracture:		
Post fracture angulation	>20 degree angulation	D
Physical examination -- range of motion	Range of motion: flexion <60 degrees	D
Physical examination -- range of motion	Flexion contracture (20 or > degrees)	D
Osteomyelitis, chronic knee:		
Physical examination -- range of motion	Range of motion: flexion <60 degrees	D
Physical examination -- range of motion	Flexion contracture (20 or > degrees)	D
Physical examination	Valgus deformity, 16 - 20 degrees	D
Physical examination	Varus deformity, 8 - 12 degrees	D
Medical record review	Frequent episodes of infection requiring treatment	D
X-ray knee	0 - 1 mm cartilage interval with degenerative change	D
Osteonecrosis:		
Physical examination -- range of motion	Range of motion: flexion <60 degrees	D
Physical examination -- range of motion	Flexion contracture (20 or > degrees)	D
Physical examination	Valgus deformity, 16 - 20 degrees	D
Physical examination	Varus deformity, 8 - 12 degrees	D
X-ray knee	0 - 1 mm cartilage interval with degenerative change	D
Patellofemoral arthritis:		
Physical examination -- range of motion	Range of motion: flexion <60 degrees	D
Physical examination -- range of motion	Flexion contracture (20 or > degrees)	D
Physical examination	Valgus deformity, 16 - 20 degrees	D
Physical examination	Varus deformity, 8 - 12 degrees	D
X-ray knee: patello femoral joint	0 mm cartilage interval with degenerative change	D
Patellar fracture nonunion with displacement:		
Physical examination -- range of motion	Range of motion: flexion <60 degrees	D
Physical examination -- range of motion	Flexion contracture (20 or > degrees)	D
X-ray knee	Nonunion and >3 mm displacement	D
Plateau fracture:		
Post fracture angulation	>20 degrees angulation	D
Physical examination -- range of motion	Range of motion: flexion <60 degrees	D
Physical examination -- range of motion	Flexion contracture (20 or > degrees)	D
Patellectomy:		
Physical examination -- range of motion	Range of motion: flexion <60 degrees	D
Physical examination -- range of motion	Flexion contracture (20 or > degrees)	D
Patellar, subluxation, recurrent:		
Physical examination -- range of motion	Range of motion: flexion <60 degrees	D
Physical examination -- range of motion	Flexion contracture (20 or > degrees)	D
Supracondylar fracture:		
Post fracture angulation	>20 degrees angulation	D
Physical examination -- range of motion	Range of motion: flexion <60 degrees	D
Physical examination -- range of motion	Flexion contracture (20 or > degrees)	D

Disability test	Test result	Disability classification
Tibial shaft fracture:		
Physical examination -- range of motion	Range of motion: flexion <60 degrees	D
Physical examination -- range of motion	Flexion contracture (20 or > degrees)	D
Post fracture angulation	>20 degrees malalignment	D
BODY PART: KNEE JOB TITLE: MACHINIST		
Arthritis knee:		
Physical examination -- range of motion	Range of motion: flexion <60 degrees	D
Physical examination -- range of motion	Flexion contracture (20 or > degrees)	D
Physical examination	Valgus deformity, 16 - 20 degrees	D
Physical examination	Varus deformity, 8 - 12 degrees	D
X-ray knee	0 - 1 mm cartilage interval with degenerative change	D
Meniscectomy, medial or lateral:		
Physical examination -- range of motion	Range of motion: flexion <60 degrees	D
Physical examination -- range of motion	Flexion contracture (20 or > degrees)	D
Collateral ligament tear with laxity:		
Physical examination -- range of motion	Range of motion: flexion <60 degrees	D
Physical examination -- range of motion	Flexion contracture (20 or > degrees)	D
Cruciate and collateral ligament tear:		
Physical examination -- range of motion	Range of motion: flexion <60 degrees	D
Physical examination -- range of motion	Flexion contracture (20 or > degrees)	D
Cruciate ligament tear with laxity:		
Physical examination -- range of motion	Range of motion: flexion <60 degrees	D
Physical examination -- range of motion	Flexion contracture (20 or > degrees)	D
Intercondylar fracture:		
Post fracture angulation	>20 degrees angulation	D
Physical examination -- range of motion	Range of motion: flexion <60 degrees	D
Physical examination -- range of motion	Flexion contracture (20 or > degrees)	D
Osteomyelitis, chronic knee:		
Physical examination -- range of motion	Range of motion: flexion <60 degrees	D
Physical examination -- range of motion	Flexion contracture (20 or > degrees)	D
Physical examination	Valgus deformity, 16 - 20 degrees	D
Physical examination	Varus deformity, 8 - 12 degrees	D
Medical record review	Frequent episodes of infection requiring treatment	D
X-ray knee	0 - 1 mm cartilage interval with degenerative change	D
Osteonecrosis:		
Physical examination -- range of motion	Range of motion: flexion <60 degrees	D
Physical examination -- range of motion	Flexion contracture (20 or > degrees)	D
Physical examination	Valgus deformity, 16 - 20 degrees	D
Physical examination	Varus deformity, 8 - 12 degrees	D
X-ray knee	0 - 1 mm cartilage interval with degenerative change	D
Patellofemoral arthritis:		
Physical examination -- range of motion	Range of motion: flexion <60 degrees	D
Physical examination -- range of motion	Flexion contracture (20 or > degrees)	D
Physical examination	Valgus deformity, 16 - 20 degrees	D
Physical examination	Varus deformity, 8 - 12 degrees	D
X-ray knee	0 mm cartilage interval with degenerative change	D
Patellar fracture nonunion with displacement:		
Physical examination -- range of motion	Range of motion: flexion <60 degrees	D
Physical examination -- range of motion	Flexion contracture (20 or > degrees)	D
X-ray knee	Nonunion and >3 mm displacement	D
Plateau fracture:		
Post fracture angulation	>20 degrees angulation	D
Physical examination -- range of motion	Range of motion: flexion <60 degrees	D
Physical examination -- range of motion	Flexion contracture (20 or > degrees)	D
Patellectomy:		
Physical examination -- range of motion	Range of motion: flexion <60 degrees	D
Physical examination -- range of motion	Flexion contracture (20 or > degrees)	D
Patellar, subluxation, recurrent:		
Physical examination -- range of motion	Range of motion: flexion <60 degrees	D
Physical examination -- range of motion	Flexion contracture (20 or > degrees)	D
Supracondylar fracture:		
Post fracture angulation	>20 degrees angulation	D
Physical examination -- range of motion	Range of motion: flexion <60 degrees	D
Physical examination -- range of motion	Flexion contracture (20 or > degrees)	D
Tibial shaft fracture:		
Physical examination -- range of motion	Range of motion: flexion <60 degrees	D
Physical examination -- range of motion	Flexion contracture (20 or > degrees)	D
Post fracture angulation	>20 degrees malalignment	D

Disability test	Test result	Disability classification
BODY PART: KNEE JOB TITLE: SHOP LABORER		
Arthritis knee:		
Physical examination -- range of motion	Range of motion: flexion <60 degrees	D
Physical examination -- range of motion	Flexion contracture (20 or > degrees)	D
Physical examination	Valgus deformity, 16 - 20 degrees	D
Physical examination	Varus deformity, 8 - 12 degrees	D
X-ray knee	0 - 1 mm cartilage interval with degenerative change	D
Meniscectomy, medial or lateral:		
Physical examination -- range of motion	Range of motion: flexion <60 degrees	D
Physical examination -- range of motion	Flexion contracture (20 or > degrees)	D
Collateral ligament tear with laxity:		
Physical examination -- range of motion	Range of motion: flexion <60 degrees	D
Physical examination -- range of motion	Flexion contracture (20 or > degrees)	D
Cruciate and collateral ligament tear:		
Physical examination -- range of motion	Range of motion: flexion <60 degrees	D
Physical examination -- range of motion	Flexion contracture (20 or > degrees)	D
Cruciate ligament tear with laxity:		
Physical examination -- range of motion	Range of motion: flexion <60 degrees	D
Physical examination -- range of motion	Flexion contracture (20 or > degrees)	D
Intercondylar fracture:		
Post fracture angulation	>20 degrees angulation	D
Physical examination -- range of motion	Range of motion: flexion <60 degrees	D
Physical examination -- range of motion	Flexion contracture (20 or > degrees)	D
Osteomyelitis, chronic knee:		
Physical examination -- range of motion	Range of motion: flexion <60 degrees	D
Physical examination -- range of motion	Flexion contracture (20 or > degrees)	D
Physical examination	Valgus deformity, 16 - 20 degrees	D
Physical examination	Varus deformity, 8 - 12 degrees	D
Medical record review	Frequent episodes of infection requiring treatment	D
X-ray knee	0 - 1 mm cartilage interval with degenerative change	D
Osteonecrosis:		
Physical examination -- range of motion	Range of motion: flexion <60 degrees	D
Physical examination -- range of motion	Flexion contracture (20 or > degrees)	D
Physical examination	Valgus deformity, 16 - 20 degrees	D
Physical examination	Varus deformity, 8 - 12 degrees	D
X-ray knee	0 - 1 mm cartilage interval with degenerative change	D
Patellofemoral arthritis:		
Physical examination -- range of motion	Range of motion: flexion <60 degrees	D
Physical examination -- range of motion	Flexion contracture (20 or > degrees)	D
Physical examination	Valgus deformity, 16 - 20 degrees	D
Physical examination	Varus deformity, 8 - 12 degrees	D
X-ray knee: patellofemoral joint	0 mm cartilage interval with degenerative change	D
Patellar fracture nonunion with displacement:		
Physical examination -- range of motion	Range of motion: flexion <60 degrees	D
Physical examination -- range of motion	Flexion contracture (20 or > degrees)	D
X-ray knee	Nonunion and >3 mm displacement	D
Plateau fracture:		
Post fracture angulation	>20 degrees angulation	D
Physical examination -- range of motion	Range of motion: flexion <60 degrees	D
Physical examination -- range of motion	Flexion contracture (20 or > degrees)	D
Patellectomy:		
Physical examination -- range of motion	Range of motion: flexion <60 degrees	D
Physical examination -- range of motion	Flexion contracture (20 or > degrees)	D
Patellar, subluxation, recurrent:		
Physical examination -- range of motion	Range of motion: flexion <60 degrees	D
Physical examination -- range of motion	Flexion contracture (20 or > degrees)	D
Supracondylar fracture:		
Post fracture angulation	>20 degrees angulation	D
Physical examination -- range of motion	Range of motion: flexion <60 degrees	D
Physical examination -- range of motion	Flexion contracture (20 or > degrees)	D
Tibial shaft fracture:		
Physical examination -- range of motion	Range of motion: flexion <60 degrees	D
Physical examination -- range of motion	Flexion contracture (20 or > degrees)	D
Post fracture angulation	>20 degrees malalignment	D

K. Ankle and Foot

Confirmatory test	Minimum result	Requirements
BODY PART: ANKLE AND FOOT CONFIRMATORY TESTS		
Ankle fracture:		
Medical record review	Documented history of ankle fracture	Recommended.
X-ray: ankle	Ankle fracture	Highly recommended.
Ankylosis, ankle:		
X-ray: ankle	Extensive joint destruction	Highly recommended.
Physical examination	No mobility	Highly recommended.
Arthritis, subtalar joint:		
X-ray: ankle	Evidence of significant arthritis: subtalar joint	Highly recommended.
Arthritis, talonavicular joint:		
X-ray: ankle	Significant arthritis: talonavicular joint	Highly recommended.
Achilles tendon rupture:		
Medical record review	Documentation of achilles tendon rupture	Highly recommended.
Physical examination	Rupture of achilles tendon	Highly recommended.
Arthritis, ankle:		
X-ray: ankle	Significant arthritis	Highly recommended.
Hindfoot fracture:		
X-ray: foot and ankle	Documentation of fracture	Highly recommended.
Rheumatoid arthritis, foot:		
Medical History	Documented history of condition	Highly recommended.
X-ray: foot	Significant arthritis	Highly recommended.

Disability test	Test result	Disability classification
BODY PART: ANKLE AND FOOT JOB TITLE: TRAINMAN		
Ankle fracture:		
X-ray: ankle	Displaced intra-articular fracture	D
Physical examination	Varus deformity >15 degrees	D
Physical examination -- range of motion	Plantar flexion capability <5 degrees	D
Physical examination -- range of motion	Plantar flexion contracture 20 degrees	D
Ankylosis, ankle:		
Physical examination -- range of motion	Ankylosis in 20 degree or > dorsiflexion	D
Physical examination -- range of motion	Ankylosis in 20 degree plantar flexion	D
Physical examination -- range of motion	Ankylosis in int or ext malrotation >15 degrees	D
Physical examination -- range of motion	Ankylosis in varus 10 or more degrees	D
Physical examination -- range of motion	Ankylosis in valgus 10 or more degrees	D
Arthritis, subtalar joint (hindfoot):		
X-ray: ankle -- subtalar joint	Subtalar joint space 0 mm	D
Physical examination -- range of motion	Plantar flexion capability <5 degrees	D
Physical examination -- range of motion	Plantar flexion contracture 20 degrees	D
Physical examination	Varus deformity >15 degrees	D
Arthritis, talonavicular joint (hindfoot):		
Physical examination -- range of motion	Plantar flexion capability <5 degrees	D
Physical examination -- range of motion	Plantar flexion contracture 20 degrees	D
X-ray: ankle -- talonavicular joint	Talonavicular joint space 0 mm	D
Physical examination	Varus deformity >15 degrees	D
Achilles tendon rupture:		
Physical examination -- range of motion	Plantar flexion capability, <5 degrees	D
Physical examination -- range of motion	Plantar flexion contracture, 20 degrees	D
Arthritis, ankle:		
X-ray: ankle	0 mm	D
Physical examination -- range of motion	Plantar flexion capability, <5 degrees	D
Physical examination -- range of motion	Plantar flexion contracture, 20 degrees	D
Physical examination	Varus deformity >15 degrees	D
Hindfoot fracture:		
X-ray: foot	Calcaneal fracture with Boehler angle <95 degrees	D
X-ray: foot	Subtalar fracture with Boehler angle <95 degrees	D
Physical examination	Varus angulation >20 degrees (hindfoot)	D
Physical examination	Valgus angulation >20 degrees (hindfoot)	D
Rheumatoid arthritis, foot:		
X-ray: foot	Significant degeneration	D
Medical record review	Chronic flare-up with treatment	D

Disability test	Test result	Disability classification
BODY PART: ANKLE AND FOOT JOB TITLE: ENGINEER		
Ankle fracture:		
X-ray: ankle	Displaced intra-articular fracture	D
Physical examination	Varus deformity >15 degrees	D
Physical examination -- range of motion	Plantar flexion capability <5 degrees	D
Physical examination -- range of motion	Plantar flexion contracture 20 degrees	D
Ankylosis, ankle:		
Physical examination -- range of motion	Ankylosis in 20 degree or > dorsiflexion	D
Physical examination -- range of motion	Ankylosis in 20 degree plantar flexion	D
Physical examination -- range of motion	Ankylosis in int or ext malrotation >15 degrees	D
Physical examination -- range of motion	Ankylosis in varus 10 or more degrees	D
Physical examination -- range of motion	Ankylosis in valgus 10 or more degrees	D
Arthritis, subtalar joint (hindfoot):		
X-ray: ankle -- subtalar joint	Subtalar joint space 0 mm	D
Physical examination -- range of motion	Plantar flexion capability <5 degrees	D
Physical examination -- range of motion	Plantar flexion contracture 20 degrees	D
Physical examination	Varus deformity >15 degrees	D
Arthritis, talonavicular joint (hindfoot):		
Physical examination -- range of motion	Plantar flexion capability <5 degrees	D
Physical examination -- range of motion	Plantar flexion contracture 20 degrees	D
X-ray ankle -- talonavicular joint	Talonavicular joint space 0 mm	D
Physical examination	Varus deformity >15 degrees	D
Achilles tendon rupture:		
Physical examination -- range of motion	Plantar flexion capability <5 degrees	D
Physical examination -- range of motion	Plantar flexion contracture 20 degrees	D
Arthritis, ankle:		
X-ray: ankle	0 mm	D
Physical examination -- range of motion	Plantar flexion capability <5 degrees	D
Physical examination -- range of motion	Plantar flexion contracture 20 degrees	D
Physical examination	Varus deformity >15 degrees	D
Hindfoot fracture:		
X-ray: foot	Calcaneal fracture with Boehler angle <95 degrees	D
X-ray: foot	Subtalar fracture with Boehler angle <95 degrees	D
Physical examination	Varus angulation >20 degrees (hindfoot)	D
Physical examination	Valgus angulation >20 degrees (hindfoot)	D
Rheumatoid arthritis, foot:		
X-ray: foot	Significant degeneration	D
Medical record review	Chronic flare-up with treatment	D
BODY PART: ANKLE AND FOOT JOB TITLE: DISPATCHER		
Achilles tendon rupture:		
Physical examination -- range of motion	Plantar flexion capability <5 degrees	D
Physical examination -- range of motion	Plantar flexion contracture 20 degrees	D
Arthritis, ankle:		
X-ray: ankle	0 mm	D
Physical examination -- range of motion	Plantar flexion capability <5 degrees	D
Physical examination -- range of motion	Plantar flexion contracture 20 degrees	D
Physical examination	Varus deformity >15 degrees	D
Hindfoot fracture:		
X-ray: foot	Calcaneal fracture with Boehler angle <95 degrees	D
X-ray: foot	Subtalar fracture with Boehler angle <95 degrees	D
Physical examination	Varus angulation >20 degrees (hindfoot)	D
Physical examination	Valgus angulation >20 degrees (hindfoot)	D
Rheumatoid arthritis, foot:		
X-ray: foot	Significant degeneration	D
Medical record review	Chronic flare-up with treatment	D
BODY PART: ANKLE AND FOOT JOB TITLE: CARMAN		
Ankle fracture:		
X-ray: ankle	Displaced intra-articular fracture	D
Physical examination	Varus deformity >15 degrees	D
Physical examination -- range of motion	Plantar flexion capability <5 degrees	D
Physical examination -- range of motion	Plantar flexion contracture 20 degrees	D
Ankylosis, ankle:		
Physical examination -- range of motion	Ankylosis in 20 degree or > dorisiflexion	D
Physical examination -- range of motion	Ankylosis in 20 degree plantar flexion	D

Disability test	Test result	Disability classification
Physical examination -- range of motion	Ankylois in int or ext malrotation >15 degrees	D
Physical examination -- range of motion	Ankylosis in varus 10 or more degrees	D
Physical examination -- range of motion	Ankylosis in valgus 10 or more degrees	D
Arthritis, subtalar joint (hindfoot):		
X-ray: ankle -- subtalar joint	Subtalar joint space 0 mm	D
Physical examination -- range of motion	Plantar flexion capability <5 degrees	D
Physical examination -- range of motion	Plantar flexion contracture 20 degrees	D
Physical examination	Varus deformity >15 degrees	D
Arthritis, talonavicular joint (hindfoot):		
Physical examination -- range of motion	Plantar flexion capability <5 degrees	D
Physical examination -- range of motion	Plantar flexion contracture 20 degrees	D
X-ray: ankle -- talonavicular joint	Talonavicular joint space 0 mm	0
Physical examination	Varus deformity >15 degrees	D
Achilles tendon rupture:		
Physical examination -- range of motion	Plantar flexion capability <5 degrees	D
Physical examination -- range of motion	Plantar flexion contracture 20 degrees	D
Arthritis, ankle:		
X-ray: ankle	0 mm	D
Physical examination -- range of motion	Plantar flexion capability <5 degrees	D
Physical examination -- range of motion	Plantar flexion contracture 20 degrees	D
Physical examination	Varus deformity >15 degrees	D
Hindfoot fracture:		
X-ray: foot	Calcaneal fracture with Boehler angle <95 degrees	D
X-ray: foot	Subtalar fracture with Boehler angle <95 degrees	D
Physical examination	Varus angulation >20 degrees (hindfoot)	D
Physical examination	Valgus angulation >20 degrees (hindfoot)	D
Rheumatoid arthritis, foot:		
X-ray: foot	Significant degeneration	D
Medical record review	Chronic flare -- up with treatment	D

BODY PART: ANKLE AND FOOT
JOB TITLE: SIGNALMAN

Ankle fracture:		
X-ray: ankle	Displaced intra-articular fracture	D
Physical examination	Varus deformity >15 degrees	D
Physical examination -- range of motion	Plantar flexion capability <5 degrees	D
Physical examination -- range of motion	Plantar flexion contracture 20 degrees	D
Ankylosis, ankle:		
Physical examination -- range of motion	Ankylosis in 20 degree or > dorsiflexion	D
Physical examination -- range of motion	Ankylosis in 20 degree plantar flexion	D
Physical examination -- range of motion	Ankylosis in int or ext malrotation >15 degrees	D
Physical examination -- range of motion	Ankylosis in varus 10 or more degrees	D
Physical examination -- range of motion	Ankylosis in valgus 10 or more degrees	D
Arthritis, subtalar joint (hindfoot):		
X-ray: ankle -- subtalar joint	Subtalar joint space 0 mm	D
Physical examination -- range of motion	Plantar flexion capability <5 degrees	D
Physical examination -- range of motion	Plantar flexion contracture 20 degrees	D
Physical examination	Varus deformity >15 degrees	D
Arthritis, talonavicular joint (hindfoot):		
Physical examination -- range of motion	Plantar flexion capability <5 degrees	D
Physical examination -- range of motion	Plantar flexion contracture 20 degrees	D
X-ray: ankle -- talonavicular joint	Talonavicular joint space 0 mm	D
Physical examination	Varus deformity >15 degrees	D
Achilles tendon rupture:		
Physical examination -- range of motion	Plantar flexion capability <5 degrees	D
Physical examination -- range of motion	Plantar flexion contracture 20 degrees	D
Arthritis, ankle:		
X-ray: ankle	0 mm	D
Physical examination -- range of motion	Plantar flexion capability <5 degrees	D
Physical examination -- range of motion	Plantar flexion contracture 20 degrees	D
Physical examination	Varus deformity >15 degrees	D
Hindfoot fracture:		
X-ray: foot	Calcaneal fracture with Boehler angle <95 degrees	D
X-ray: foot	Subtalar fracture with Boehler angle <95 degrees	D
Physical examination	Varus angulation >20 degrees (hindfoot)	D
Physical examination	Valgus angulation >20 degrees (hindfoot)	D
Rheumatoid arthritis, foot:		
X-ray: foot	Significant degeneration	D
Medical record review	Chronic flare-up with treatment	D

Disability test	Test result	Disability classification
BODY PART: ANKLE AND FOOT JOB TITLE: TRACKMAN		
Ankle fracture:		
X-ray: ankle	Displaced intra-articular fracture	D
Physical examination -- range of motion	Varus deformity >15 degrees	D
Physical examinaton -- range of motion	Plantar flexion capability <5 degrees	D
Physical examination -- range of motion	Plantar flexion contracture 20 degrees	D
Ankylosis, ankle:		
Physical examination -- range of motion	Ankylosis in 20 degree or > dorsiflexion	D
Physical examination -- range of motion	Ankylosis in 20 degree plantar flexion	D
Physical examination -- range of motion	Ankylosis in int or ext malrotation >15 degrees	D
Physical examination -- range of motion	Ankylosis in varus 10 or more degrees	D
Physical examination -- range of motion	Ankylosis in valgus 10 or more degrees	D
Arthritis, subtalar joint (hindfoot):		
X-ray: ankle -- subtalar joint	Subtalar joint space 0 mm	D
Physical examination -- range of motion	Plantar flexion capability <5 degrees	D
Physical examination -- range of motion	Plantar flexion contracture 20 degrees	D
Physical examination	Varus deformity >15 degrees	D
Arthritis, talonavicular joint (hindfoot):		
Physical examination -- range of motion	Plantar flexion capability <5 degrees	D
Physical examination -- range of motion	Plantar flexion contracture 20 degrees	D
X-ray: angle -- talonavicular joint	Talonavicular joint space 0 mm	D
Physical examination	Varus deformity >15 degrees	D
Achilles tendon rupture:		
Physical examination -- range of motion	Plantar flexion capability <5 degrees	D
Physical examination -- range of motion	Plantar flexion contracture 20 degrees	D
Arthritis, ankle:		
X-ray: ankle	0 mm	D
Physical examination -- range of motion	Plantar flexion capability <5 degrees	D
Physical examination	Varus deformity >15 degrees	D
Hindfoot fracture:		
X-ray: foot	Calcaneal fracture with Boehler angle <95 degrees	D
X-ray: foot	Subtalar fracture with Boehler angle <95 degrees	D
Physical examination	Varus angulation >20 degrees (hindfoot)	D
Physical examination	Valgus angulation >20 degrees (hindfoot)	D
Rheumatoid arthritis, foot:		
X-ray: foot	Significant degeneration	D
Medical record review	Chronic flare-up with treatment	D
BODY PART: ANKLE AND FOOT JOB TITLE: MACHINIST		
Ankle fracture:		
X-ray: ankle	Displaced intra-articular fracture	D
Physical examination	Varus deformity >15 degrees	D
Physical examination -- range of motion	Plantar flexion capability <5 degrees	D
Physical examination -- range of motion	Plantar flexion contracture 20 degrees	D
Ankylosis, ankle:		
Physical examination -- range of motion	Ankylosis in 20 degree or > dorsiflexion	D
Physical examination -- range of motion	Ankylosis in 20 degree plantar flexion	D
Physical examination -- range of motion	Ankylosis in int or ext malrotation >15 degrees	D
Physical examination -- range of motion	Ankylosis in varus 10 or more degrees	D
Physical examination -- range of motion	Ankylosis in valgus 10 or more degrees	D
Arthritis, subtalar joint (hindfoot):		
X-ray: ankle -- subtalar joint	Subtalar joint space 0 mm	D
Physical examination -- range of motion	Plantar flexion capability <5 degrees	D
Physical examination -- range of motion	Plantar flexion contracture 20 degrees	D
Physical examination	Varus deformity >15 degrees	D
Arthritis, talonavicular joint (hindfoot):		
Physical examination -- range of motion	Plantar flexion capability <5 degrees	D
Physical examination -- range of motion	Plantar flexion contracture 20 degrees	D
X-ray: ankle -- talonavicular joint	Talonavicular joint space 0 mm	D
Physical examination	Varus deformity >15 degrees	D
Achilles tendon rupture:		
Physical examination -- range of motion	Plantar flexion capability <5 degrees	D
Physical examination -- range of motion	Plantar flexion contracture 20 degrees	D
Arthritis, ankle:		
X-ray: ankle	0 mm	D
Physical examination -- range of motion	Plantar flexion capability <5 degrees	D
Physical examination -- range of motion	Plantar flexion contracture 20 degrees	D
Physical examination	Varus deformity >15 degrees	D

Disability test	Test result	Disability classification
Hindfoot fracture:		
X-ray: foot	Calcaneal fracture with Boehler angle <95 degrees	D
X-ray: foot	Subtalar fracture with Boehler angle <95 degrees	D
Physical examination	Varus angulation >20 degrees (hindfoot)	D
Physical examination	Valgus angulation >20 degrees (hindfoot)	D
Rheumatoid arthritis, foot:		
X-ray: foot	Significant degeneration	D
Medical record review	Chronic flare-up with treatment	D
BODY PART: ANKLE AND FOOT JOB TITLE: SHOP LABORER		
Ankle fracture:		
X-ray: ankle	Displaced intra-articular fracture	D
Physical examination	Varus deformity >15 degrees	D
Physical examination -- range of motion	Plantar flexion capability <5 degrees	D
Physical examination -- range of motion	Plantar flexion contracture 20 degrees	D
Ankylosis, ankle:		
Physical examination -- range of motion	Ankylosis in 20 degree or > dorsiflexion	D
Physical examination -- range of motion	Ankylosis in 20 degree plantar flexion	D
Physical examination -- range of motion	Ankylosis in int or ext malrotation >15 degrees	D
Physical examination -- range of motion	Ankylosis in varus 10 or more degrees	D
Physical examination -- range of motion	Ankylosis in valgus 10 or more degrees	D
Arthritis, subtalar joint (hindfoot):		
X-ray: ankle -- subtalar joint	Subtalar joint space 0 mm	D
Physical examination -- range of motion	Plantar flexion capability <5 degrees	D
Physical examination -- range of motion	Plantar flexion contracture 20 degrees	D
Physical examination	Varus deformity >15 degrees	D
Arthritis, talonavicular joint (hindfoot):		
Physical examination -- range of motion	Plantar flexion capability <5 degrees	D
Physical examination -- range of motion	Plantar flexion contracture 20 degrees	D
X-ray: ankle -- talonavicular joint	Talonavicular joint space 0 mm	D
Physical examination	Varus deformity >15 degrees	D
Achilles tendon rupture:		
Physical examination -- range of motion	Plantar flexion capability <5 degrees	D
Physical examination -- range of motion	Plantar flexion contracture 20 degrees	D
Arthritis, ankle:		
X-ray: ankle	0 mm	D
Physical examination -- range of motion	Plantar flexion capability <5 degrees	D
Physical examination -- range of motion	Plantar flexion contracture 20 degrees	D
Physical examination	Varus deformity >15 degrees	D
Hindfoot fracture:		
X-ray: foot	Calcaneal fracture with Boehler angle <95 degrees	D
X-ray: foot	Subtalar fracture with Boehler angle <95 degrees	D
Physical examination	Varus angulation >20 degrees (hindfoot)	D
Physical examination	Valgus angulation >20 degrees (hindfoot)	D
Rheumatoid arthritis, foot:		
X-ray: foot	Significant degeneration	D
Medical record review	Chronic flare-up with treatment	D

Disability test	Test result	Disability classification
BODY PART: ANKLE AND FOOT JOB TITLE: SALES REPRESENTATIVES		
Achilles tendon rupture:		
Physical examination -- range of motion	Plantar flexion capability <5 degrees	D
Physical examination -- range of motion	Plantar flexion contracture 20 degrees	D
Arthritis, ankle:		
X-ray: ankle	0 mm	D
Physical examination -- range of motion	Plantar flexion capability <5 degrees	D
Physical examination -- range of motion	Plantar flexion contracture 20 degrees	D
Physical examination	Varus deformity >15 degrees	D
Hindfoot fracture:		
X-ray: foot	Calcaneal fracture with Boehler angle <95 degrees	D
X-ray: foot	Subtalar fracture with Boehler angle <95 degrees	D
Physical examination	Varus angulation >20 degrees (hindfoot)	D
Physical examination	Valgus angulation >20 degrees (hindfoot)	D
Rheumatoid arthritis, foot:		
X-ray: foot	Significant degeneration	D
Medical record review	Chronic flare-up with treatment	D

BILLING CODE 7905–01–P

Job Information Forms

Form Approved
OMB No. 3220-0193

JOB INFORMATION FORM

RRB Claim Number
Employee's Name
Date Released
Regular Railroad Occupation*
Location
Date Last Worked

* The regular railroad occupation is: 1) the occupation in which the employee has been engaged for more calendar months than any other occupation during the last preceding 5 calendar years, whether consecutive or not; or 2) the occupation which the employee has been in service for not less than one-half of all months in which the employee has been engaged in service during the last 15 consecutive calendar years; or 3) if an employee last worked as an officer or employee of a railway labor organization and if that employment is no longer available, the regular occupation shall be the position to which the employee holds seniority rights or the position left to work for the railway labor organization.

The above-named railroad employee has applied for an occupational disability benefit under section 2(a)(iv) of the Railroad Retirement Act. Railroad Retirement Board (RRB) regulation 20 CFR 220.13 (b)(2) provides that railroad employers may furnish pertinent information concerning the job duties the employee is required to perform. If you wish to provide job duty information on the above-named employee, it must be received by the RRB no later than _____.

EMPLOYER INFORMATION

The attached list of job duties indicate those duties generally performed by the employee.

Please provide any additional information on the duties the employee performed over the last 5 years, or 15 years if appropriate.

This information can be entered in the Remarks section or attached to this form.

G-251a(12-97)

Job information should be sent to:

U.S. RAILROAD RETIREMENT BOARD
844 NORTH RUSH STREET
CHICAGO, ILLINOIS 60611-2092
ATTENTION: DISABILITY PROGRAMS SECTION

or a facsimile may be sent to (312)751-7167.

Employer Certification - The information contained in this report is correct to the best of my knowledge and belief.

NAME _____ SIGNATURE _____
(Please Print)
TITLE _____ DATE _____/_____/_____
(Please Print)
TELEPHONE NO (_____)_____

Remarks:

Paperwork Reduction Act Notice

Section 7 (b)(6) of the Railroad Retirement Act (RRA) allows the Railroad Retirement Board (RRB) to collect this information. While you are not required to respond, the information you provide will be used by the RRB in determining an applicant's eligibility for an occupational disability under the RRA.

We estimate that this form takes an average of 20 minutes per response to complete, including the time for reviewing the instructions, getting the needed data, and reviewing the completed form. *Federal agencies may not conduct or sponsor, and respondents are not required to respond to, a collection of information unless it displays a valid OMB number.* If you wish, send comments regarding the accuracy of our estimate or any other aspects of this form, including suggestions for reducing the completion time to: Chief of Information Management, Railroad Retirement Board, 844 North Rush Street, Chicago, IL 60611-2092 and to the Office of Management and Budget, Paperwork Reduction Project (3220-0193), Washington DC 20503. Please do **not** return this form to either of these addresses.

G-251a (12-97)

Form Approved
OMB No. 3220-0193

JOB INFORMATION FORM

RRB Claim Number
Employee's Name
Date Released
Regular Railroad Occupation*
Location
Date Last Worked

* The regular railroad occupation is: 1) the occupation in which the employee has been engaged for more calendar months than any other occupation during the last preceding five calendar years, whether consecutive or not; or 2) the occupation which the employee has been in service for not less than one-half of all months in which the employee has been engaged in service during the last 15 consecutive calendar years; or 3) if an employee last worked as an officer or employee of a railway labor organization and if that employment is no longer available, the regular occupation shall be the position to which the employee holds seniority rights or the position left to work for the railway labor organization.

The above-named railroad employee has applied for an occupational disability benefit under section 2(a)(iv) of the Railroad Retirement Act. Railroad Retirement Board (RRB) regulation 20 CFR 220.13 (b)(2) provides that railroad employers may furnish pertinent information concerning the job duties the employee is required to perform. If you wish to provide job duty information on the above-named employee, it must be received by the RRB no later than _____.

EMPLOYER INFORMATION

You may wish to provide the RRB with job duty information. If so, the job information that is needed for a disability decision should include a full description of the basic duties to perform the occupation listed. For example, list the types of machinery, tools and/or equipment used, technical knowledge or skills involved, and number of people supervised. Also include the types of physical activities involved in a typical 8 hour work day, such as how many hours of walking, standing or sitting, what items are lifted and carried and how much these items weigh, and how often bending, crouching, kneeling, reaching and climbing are performed. If exposure to environmental hazards, such as working at heights or around dangerous machinery, in extreme temperatures or excessive noise are present, also list these.

G-251b(12-97)

This information can be entered in the Remarks section or attached to this form.

Job information should be sent to:

U.S. RAILROAD RETIREMENT BOARD
844 NORTH RUSH STREET
CHICAGO, ILLINOIS 60611-2092
ATTENTION: DISABILITY PROGRAMS SECTION

or a facsimile may be sent to (312)751-7167.

Employer Certification - The information contained in this report is correct to the best of my knowledge and belief.

NAME _____ SIGNATURE _____
(Please Print)
TITLE _____ DATE _____/_____/_____
(Please Print)
TELEPHONE NO (____) _____

Remarks:

Paperwork Reduction Act Notice

Section 7 (b)(6) of the Railroad Retirement Act (RRA) allows the Railroad Retirement Board (RRB) to collect this information. While you are not required to respond, the information you provide will be used by the RRB in determining an applicant's eligibility for an occupational disability under the RRA.

We estimate that this form takes an average of 20 minutes per response to complete, including the time for reviewing the instructions, getting the needed data, and reviewing the completed form. *Federal agencies may not conduct or sponsor, and respondents are not required to respond to, a collection of information unless it displays a valid OMB number.* If you wish, send comments regarding the accuracy of our estimate or any other aspects of this form, including suggestions for reducing the completion time to: Chief of Information Management, Railroad Retirement Board, 844 North Rush Street, Chicago, IL 60611-2092 and to the Office of Management and Budget, Paperwork Reduction Project (3220-0193), Washington DC 20503. Please do **not** return this form to either of these addresses.

G-251b (12-97)

Dated: January 14, 1998.

Beatrice Ezerski,

Secretary to the Board.

[FR Doc. 98–2026 Filed 2–12–98; 8:45 am]

BILLING CODE 7905–01–C