

COMPETENCY MODEL FOR
POWER SHOVEL OPERATOR (3558)

The following competencies have been identified as those that best separate superior from satisfactory job performance in the class of **POWER SHOVEL OPERATOR**:

1. Reading Comprehension
2. Mathematics
8. Safety Focus
20. Job Knowledge
23. Equipment Operation
35. Teamwork
46. Listening

On the following pages are descriptions of each competency, including a definition, the level of the competency required for the class (bolded and underlined), examples of behavioral indicators, and satisfactory and superior performance level.

1. READING COMPREHENSION – Comprehends and correctly applies information presented in written form. Makes correct inferences; draws accurate conclusions.

Level of Competency Required by Job:

Level 1: Concrete, specific job-related information (work orders; instructions; material/equipment labels)

Level 2: General information related to field of work and assignments; (articles in trade publications; technical/instructional manuals; memos; letters; e-mails; reports)

Level 3: Abstract/complex information (highly technical articles/ reports in specialized area; legal or other regulatory material)

Examples of Behavioral Indicators:

- Follows written instructions correctly.
- Learns information presented in writing.
- Identifies relevant written information.
- Interprets written legal regulatory material accurately.

Performance Levels:

Satisfactory

Reads instructions correctly. Learns from manual and other printed material.

Superior

Learns from manual and may answer others' questions. Explains information presented in written form to others.

2. MATHEMATICS – Performs arithmetic or higher-level mathematical computations accurately.

Level of Competency Required by Job:

Level 1: Perform arithmetic computations (add, subtract, multiply, divide, ratios, percentages).

Level 2: Use algebra (substitute numbers for letters in a formula), geometry (angles, distances, area), and/or descriptive statistics (mean/median/mode, standard deviation, range).

Level 3: Apply and interpret calculus, inferential statistics (t-tests, correlations, ANOVA, multiple regression) or other very high level mathematics.

Examples of Behavioral Indicators:

- Quickly and accurately performs arithmetic computations.
- Appropriately selects and applies formulas for stated purpose.
- Correctly identifies an appropriate analysis for a specific purpose and selects the appropriate computer program for computation.
- Accurately interprets and presents results of mathematical/statistical computations.

Performance Levels:

Satisfactory

Knows mathematical requirements of the job and performs them correctly. Verifies work to ensure accuracy.

Superior

Identifies additional opportunities for the application of mathematics in work. Answers questions/trains others to assist them in their use of mathematics.

8. SAFETY FOCUS – Performs work in a way that minimizes risk of injury to self or others.

Level of Competency Required by Job:

Level 1: Maintain awareness of unsafe conditions and actions to avoid injury.

Level 2: Follow safety rules/procedures; avoid known hazards in the work environment.

Level 3: Carefully follow safety rules and procedures and consistently use all necessary safety equipment.

Examples of Behavioral Indicators:

- Wears seat belt.
- Ensures safe physical work environment by taking actions such as eliminating unstable stacks of materials, closing drawers so filing cabinets will not tip over, and keeping pathways clear of tripping hazards.
- Reviews safety procedures before beginning each job with known hazards.
- Follows safety procedures while performing work even when it takes more time.
- Uses safety equipment such as goggles, gloves, and earplugs as required or warranted.
- Frequently checks safety equipment for proper condition and operation.

Performance Levels:

Satisfactory

Maintains awareness of personal safety to avoid injury or property damage during all work activities.

Superior

“Safety first.” Places avoidance of injury or property damage above all other job requirements. Mentions the need to follow safe work practices to co-workers. Actively seeks ways to avoid injury.

20. JOB KNOWLEDGE – Knows information required to perform a specific job. Includes both widely available courses of study (for example, chemistry, human resources management, graphic arts) and City-specific information (parking regulation and ticketing practices; purchasing procedures; provisions of the City Charter).

Level of Competency Required by Job:

Level 1: Knowledge is concrete, factual, and/or procedural and may be defined by the organization. Situations in which it is applied are quite consistent.

Level 2: Knowledge is substantive and may be defined by an external trade, field, or profession. Situations in which it is applied vary and, as such, require breadth and depth of understanding.

Level 3: Knowledge is abstract, conceptual, and/or complex and may be supported by a well-defined academic discipline or authoritative sources (e.g., laws, ordinances, government guidelines/regulations/codes). Situations in which it is applied may vary greatly or be novel.

Examples of Behavioral Indicators:

- Performs work correctly/avoids technical (job content related) errors.
- Answers technical questions about work accurately.
- Asks few technical questions about the performance of routine work activities.
- Offers advice (“coaching”) to new employees regarding their work.
- Develops training programs for other employees.
- Sought out as a source of information by others.

Performance Levels:

Satisfactory

Sufficient job knowledge to perform work correctly independently. Answers technical questions about work correctly.

Superior

Expertise in technical job information sufficient to serve as a resource to others. May develop training manuals/programs and/or give internal and/or external presentations related to work.

Job Knowledge Areas

1. Knowledge of specific work conditions which may affect the safe completion of a job, such as overhanging wires, voltage to distance requirements, and trees while inspecting the area of an assigned job.
2. Knowledge of the various types of equipment, such as Gradalls, excavators, hydro cranes, or lattice boom cranes and their respective capacities, sizes, weights and capabilities in order to properly operate the equipment and determine which ones can be used to safely complete the job.
3. Knowledge of load charts and sheave diagrams sufficient to determine if a crane has the rated capacity to safely conduct the job within the manufacturer's specifications.
4. Knowledge of the various safety devices of a crane, such as the load and boom indicators, in order to keep the crane within the limits specified on the load chart.
5. Knowledge of the various hand and horn signals used to communicate with the work crew such as signals to hoist, swing the house, boom up and emergency stop.
6. Knowledge of the various types of boom rigging (i.e. conventional and hydraulic) that allows a crane to function as a dragline, clamshell, pile driver or hoisting crane.
7. Knowledge of the various types of boom attachments such as buckets for excavating or stripping asphalt and hooks for hoisting loads.
8. Knowledge of the proper procedures (i.e. use of slings and shackles) of rigging a load for hoisting.
9. Knowledge of various tools, such as wrenches, sledge hammers, punches and grease guns, used to change attachments or maintain equipment (i.e. cranes, excavators, and Gradalls).
10. Knowledge of the correct procedures (i.e. freeing the dead-ends and stripping and rewinding the drum) to remove damaged load line cable and replace it with new cable.

11. Knowledge of the lubrication points, hydraulic fluid levels and maintenance intervals sufficient to properly maintain equipment.
12. Knowledge of the various problems that commonly occur with excavating and hoisting equipment, such as hydraulic leaks, flat rollers and loose nuts and bolts.
13. Knowledge of grading methods, such as cutting, filling, sloping and benching, in order to establish the required finish grade or elevation.
14. Knowledge of the meaning of the various markings used on survey stakes (such as the steepness, offset and slope) sufficient to maintain a desired grade when cutting a slope.
15. Knowledge of the California Vehicle Code, Title 13 and California Highway Patrol restrictions, as they relate to transporting equipment to/from job site in order to account for road weight restrictions, restricted hours for heavy equipment, low overpasses and low overhead wires in order to plan route to job site.

23. EQUIPMENT OPERATION – Operates specialized equipment in performance of job duties.

Level of Competency Required by Job:

Level 1: Operate equipment based on on-the-job training.

Level 2: Operate equipment based on attendance at a training program and practice.

Level 3: Operate equipment for which in-depth, complex training was required and which may require certification.

Examples of Behavioral Indicators:

- Operates equipment proficiently.
- Operates equipment with strict adherence to safety procedures.
- Understands the operation of equipment used on the job and correctly answers questions about it.
- Willingly participates in any training necessary to maintain up-to-date knowledge of equipment operation.

Performance Levels:

Satisfactory

Operates equipment safely and with a high degree of proficiency.

Superior

Operates equipment with extreme proficiency and correctly answers questions about its operation. Trains and/or coaches others in the operation of equipment.

35. TEAMWORK – Interacts effectively with others to achieve mutual objectives; readily offers assistance to others to facilitate their goal accomplishment.

Level of Competency Required by Job:

Level 1: Work effectively as a member of a work unit or project team. Readily offer assistance to others when they have too much work or have too little.

Level 2: Work effectively as a team member in which different people have different roles/responsibilities and perspectives. Identify points for collaboration with co-workers; readily offer and request assistance.

Level 3: Work effectively as a part of an interdependent team (your work gets done only if the work of the whole team is done; evaluation of team performance is more relevant than individual performance).

Examples of Behavioral Indicators:

- Discusses work-related matters with co-workers.
- Offers and requests assistance readily.
- Offers and is receptive to suggestions.
- Identifies problems with workflow that will prevent team from accomplishing its goals.
- Provides constructive criticism and feedback to team members to improve overall functioning of team.
- Assigns credit to team for accomplishments.

Performance Levels:

Satisfactory

Cooperates with co-workers and fulfills responsibilities as a member of a project team. Maintains a focus on common objectives and offers and requests assistance readily.

Superior

Sees the team as a whole; acknowledges that performance of the team is what in reality is evaluated by others. If anyone fails, everyone on the team fails.

46. LISTENING – Hears and acknowledges what others say.

Level of Competency Required by Job:

Level 1: Attentive to others speaking in interpersonal interactions.

Level 2: Comprehend information from others one-on-one, in group settings, and from oral presentations.

Level 3: Comprehend information provided/questions asked by others in public forums or other stressful circumstances.

Examples of Behavioral Indicators:

- Demonstrates correct understanding of issue as expressed by customer.
- Recalls details of information provided by a speaker.
- Expresses subtleties/nuances in information conveyed by others.
- “Answers the question asked.”
- Conveys correct information based on information obtained from a speaker.

Performance Levels:

Satisfactory

Comprehends the message conveyed by the speaker. Rephrases information clearly and accurately; recalls information and details, and answers questions about the information correctly.

Superior

Recalls specific terminology used by a speaker when important. Accurately understands subtleties and nuances in spoken language. Answers questions completely, demonstrating clear and complete comprehension of the questioners' full inquiry.

