



## QUALIFICATIONS PACK - OCCUPATIONAL STANDARDS FOR GEMS & JEWELLERY INDUSTRY

### What are Occupational Standards(OS)?

OS describe what individuals need to do, know and understand in order to carry out a particular job role or function

OS are performance standards that individuals must achieve when carrying out functions in the workplace, together with specifications of the underpinning knowledge and understanding

Contact Us: GJSCI, Mumbai





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## Introduction

# **Qualifications Pack- Laser Sawing Machine Operator**

SECTOR: GEMS & JEWELLERY SUB-SECTOR: Diamond processing OCCUPATION: Rough cutting and sawing REFERENCE ID: G&J/Q4404 ALIGNED TO: NCO-2004/ NIL Laser Sawing Machine Operator: Also known as Laser Cutter or Laser Operator or Laser Sawyer, the laser machine operator uses the laser machine to cut the diamond.

**Brief Job Description:** The individual at work needs to cut the rough diamond along the marking by fixing it on a dop or cassette or holder, then slicing it using the laser machine. A laser sawing operator is responsible for delivering perfect cut roughs in the stipulated time, while minimizing weight loss and breakage.

**Personal Attributes:** The job requires the individual to have: attention to details; good eyesight; steady hands; ability to work in a process driven team; ability to multitask; ability to work for long hours in sitting position in front of a computer; and a lot of patience.



Qualifications Pack For Laser Sawing Machine Operator



Job Details

| Qualifications Pack Code | G&J/Q4404                     |                  |          |
|--------------------------|-------------------------------|------------------|----------|
| Job Role                 | Laser Sawing Machine Operator |                  |          |
| Credits(NVEQF/NVQF/NSQF) | TBD                           | Version number   | 1.0      |
| Sector                   | Gems & Jewellery              | Drafted on       | 20/05/13 |
| Sub-sector               | Diamond Processing            | Last reviewed on | 30/07/13 |
| Occupation               | Rough Cutting and<br>Sawing   | Next review date | 15/07/15 |

| Job Role   | Laser Sawing Machine Operator<br>Also known as 'Laser Cutter' or 'Laser Operator' or 'Laser<br>Sawyer'  |  |
|--|---|--|
| Role Description   | Cutting the rough diamond using a laser sawing machine as<br>per the markings, in order to remove inclusions and maximise<br>yield, while ensuring minimum breakage   |  |
| NVEQF/NVQF level<br>Minimum Educational Qualifications<br>Maximum Educational Qualifications | 3<br>Preferably 10 <sup>th</sup> Standard Passed  |  |
| Training   | Not Applicable  |  |
| Experience   | Not Applicable  |  |
| Applicable National Occupational<br>Standards (NOS)  | Compulsory:<br>1. <u>G&amp;J/N4401 Fix rough diamond on dop or cassette or holder</u><br>2. <u>G&amp;J/N4403 Cut rough diamond using laser sawing machine</u><br>3. <u>G&amp;J/N9930 Maintain IPR</u><br>4. <u>G&amp;J/N9931 Coordinate with team and superiors</u><br>5. <u>G&amp;J/N9933 Maintain safety</u><br>Optional:<br>Not applicable |  |
| Performance Criteria   | As described in the relevant OS units   |  |

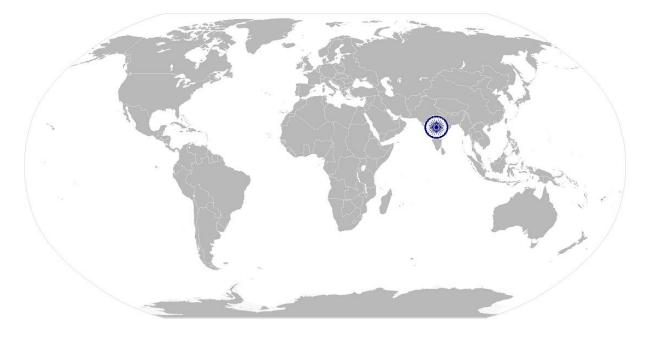






Fix rough diamond on dop or cassette or holder

# National Occupational Standard



## **Overview**

This unit is a key pre-sawing stage in diamond processing. It involves is fixing rough diamonds securely onto dops or cassette of dops or a holder using adhesives such as white cement in such a way that each diamond is aligned as per the markings for the purpose of cutting by using laser beam or blade sawing.







Fix rough diamond on dop or cassette or holder

| Unit Code                   | G&J/N4401  |  |  |  |
|-----------------------------|--|--|--|--|
| Unit Title<br>(Task)        | Fix the rough diamond on a dop or holder or cassette   |  |  |  |
| Description                 | This OS unit is about fixing rough diamond on dop / holder / cassette using adhesives,<br>levelling and aligning them as per the markings as a preparation for cutting on laser<br>machine or blade sawing   |  |  |  |
| Scope                       | This unit/task covers the following:   |  |  |  |
|                             | <ul> <li>Collect the rough diamond packet from the supervisor</li> <li>match the specifications of the roughs such as shape, size and quantity, as per those mentioned on the packet issued</li> </ul>   |  |  |  |
|                             | <ul> <li>Set the rough diamond on the dop or holder or cassette</li> <li>follow the markings in terms of the type of cut, and the number of cuts required</li> <li>select the holder /dop type for the size of the rough to be cut and the method by which it will be cut, e.g., one-sided for single rough and double-sided cassette for multiple roughs to be cut at a time</li> <li>fix the rough on the dye or holder or cassette using adhesives as prescribed by the company such as white cement, glue, or as recommended by the machine manufacturer</li> <li>place the dop or holder or cassette in the oven for the adhesive to dry up and the rough to be securely fixed</li> <li>check the levelling and alignment of the rough using the alignment screen or by an eye glass</li> <li>in case of a cassette, ensure that the alignment of all the roughs is along the same</li> </ul> |  |  |  |
|                             | <ul> <li>Report problems about:</li> <li>mismatch in rough issued and received</li> <li>problem with the planned cut which may lead to breakage</li> <li>unclear marking</li> <li>defective or inadequate number of dops/ holders /cassettes</li> <li>inadequate quantity of consumable such as adhesives</li> <li>machine break down or wear and tear of tools, etc.</li> </ul>   |  |  |  |
| Performance Criteria        |  |  |  |  |
| Element                     | Performance Criteria   |  |  |  |
| Setting rough in the holder | To be competent, the user/individual on the job must be able to:<br>PC1. accurately and securely fix rough as per the planned cut<br>PC2. accurately align and level the rough as per marking  |  |  |  |
| Productivity                | <ul> <li>To be competent, the user/individual on the job must be able to:</li> <li>PC3. achieve the productivity in terms of carats or number of pieces as set by the company</li> <li>PC4. timely delivery for further processing</li> </ul>  |  |  |  |



NOS National Occupational Standards



G&J/N4401

Fix rough diamond on dop or cassette or holder

| Controlling defects  | To be competent, the user/individual on the job must be able to:<br>PC5. ensure no damage to the rough during fixing process  |  |  |  |
|--|---|--|--|--|
| Knowledge and Unders   |   |  |  |  |
| A. Organizational<br>Context<br>(Knowledge of the<br>company /<br>organization and<br>its processes) | <ul> <li>The individual on the job needs to know and understand:</li> <li>KA1. company's policies on: acceptable limits of weight loss; incentives; delivery standards; safety practices and hazards; security and performance measurement</li> <li>KA2. work flow involved in company's diamond processing process</li> <li>KA3. importance of the individual's role in the workflow</li> <li>KA4. reporting structure</li> <li>KA5. issue return procedures followed by the company</li> </ul>  |  |  |  |
| B. Technical<br>Knowledge  | <ul> <li>The user/individual on the job needs to know and understand:</li> <li>KB1. basic characteristics of a diamond</li> <li>KB2. accurate fixing of roughs on dop/holder/cassette as per planned cut</li> <li>KB3. heat requirements such temperature, duration for different adhesives</li> <li>KB4. cleaning techniques of the rough using different chemicals and ultrasonic cleaner</li> <li>KB5. potential work hazards</li> <li>KB6. various tools and machined to be used for the fixing process, its hazards and maintenance</li> <li>KB7. use of magnifying camera with screen or an eye glass in order to check alignment</li> </ul>  |  |  |  |
| Skills (S) [Optional]  |   |  |  |  |
| A. Core Skills/<br>Generic Skills  | Basic reading and writing skills         The user/individual on the job needs to know and understand how:         SA1. to read descriptions on the diamond packets/ bags         SA2. to document work done for status and performance appraisal         Counting and measuring ability         The user/individual on the job needs to know and understand how:         SA3. to count the number of stones and arrange them in order of their size on a cassette         Communication skills         The user/individual on the job needs to know and understand how:         SA4. to discuss task, schedules, and work-loads with co-workers and supervisors         SA5. to understand instructions and report problems         Teamwork and multitasking         The user/individual on the job needs to know and understand how:         SA5. to share work load as required         SA7. to assist others who require help |  |  |  |



NOS National Occupational Standards



### G&J/N4401

Fix rough diamond on dop or cassette or holder

| B. Professional Skills   | Understanding the marking   |  |
|--|---|--|
|  | The user/individual on the job needs to know and understand how:                    |  |
|  | SB1. the rough needs to be fixed along the marking to achieve the cutting objective |  |
|  | Using tools and machines  |  |
|  | The user/individual on the job needs to know and understand how:                    |  |
|  | SB2. to use different types of adhesives in different cases                         |  |
|  | SB3. to maintain tools and machines used  |  |
|  | SB4. to work in a safe environment, i.e., without injuries                          |  |
|  | Reducing loss   |  |
|  | The user/individual on the job needs to know and understand how:                    |  |
|  | SB5. to handle diamonds with care   |  |
|  | SB6. to minimize damage or loss of any diamond during the doping process            |  |
|  | SB7. to suggest improvements in order to reduce loss                                |  |
|  | Decision making   |  |
|  | The user/individual on the job needs to know and understand how:                    |  |
|  | SB8. to make decisions pertaining to the order of fixing roughs in the cassette/dop |  |
|  | for cutting   |  |
|  | Problem solving   |  |
|  | The user/individual on the job needs to know and understand how:                    |  |
|  | SB9. to identify the factors such as quality of the glue/white cement, tools and    |  |
|  | machines used, that contribute to the fixing of roughs                              |  |
| SB10. to identify immediate or temporary solutions to avoid delays |   |  |
|  | Reflective thinking   |  |
|  | The user/individual on the job needs to know and understand how:                    |  |
|  | SB11. to plan the work to improve productivity and quality of setting the rough     |  |
|  | Critical thinking   |  |
|  | The user/individual on the job needs to know and understand how:                    |  |
|  | SB12. to spot process disruptions and delays  |  |







Fix rough diamond on dop or cassette or holder

# **NOS Version Control**

| NOS Code                               | G&J/N4401          |                  |          |
|--|--------------------|------------------|----------|
| Credits(NVEQF/NVQF/NSQF)<br>[OPTIONAL] | TBD                | Version number   | 1.0      |
| Industry                               | Gems & Jewellery   | Drafted on       | 20/05/13 |
| Industry Sub-sector                    | Diamond Processing | Last reviewed on | 30/07/13 |
|  |                    | Next review date | 15/07/15 |

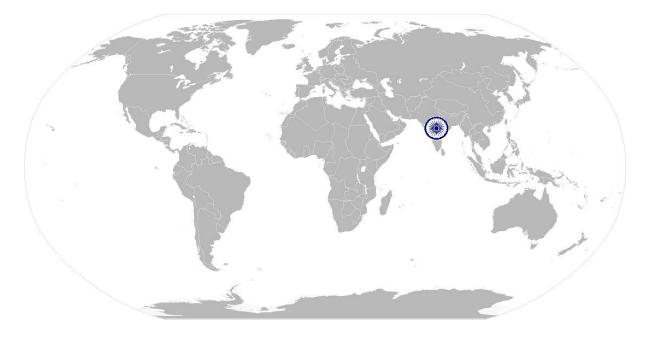






Cut the rough diamond using laser sawing machine

# National Occupational Standard



## **Overview**

This unit is about operating the laser machine in order to cut the rough diamond into one or several pieces by passing a laser beam through it along the line of the marking without causing any other damage to the stone.







| Unit Code            | G&J/N4403   |
|----------------------|---|
| Unit Title<br>(Task) | Cut the rough diamond using a laser sawing machine  |
| Description          | This OS unit is about cutting the rough diamond into smaller pieces as per the markings so that inclusions are removed and maximum yield is achieved as per the planned cut   |
| Scope                | <ul> <li>planned cut</li> <li>This unit/task covers the following:</li> <li>Collect the rough diamond dops or cassettes from the supervisor <ul> <li>match specifications such as shape, size, dimensions, etc., and marking of the fixed rough received as per those mentioned on the bag</li> </ul> </li> <li>Set the doped rough diamond in the laser sawing machine <ul> <li>follow the marking specifications in terms of the type of cut, and the number of cuts required</li> <li>place the fixed rough on the platform of laser sawing machine</li> <li>check the alignment of the fixed rough on the holder with respect to marking for the planned cut</li> <li>enter the dimensions of the rough in the computer program</li> <li>align the laser beam cutting line with the marking on the rough before starting to cut</li> <li>start the laser machine</li> <li>continuously monitor the cutting process on screen</li> <li>stop the laser cutting machine immediately in case any problem such as faulty cut or damage to the stone is observed</li> </ul> </li> </ul> |
|                      | <ul> <li>stop the laser machine once the rough has been sawed as per the marked line</li> <li>change the alignment and repeat the process if another cut is required</li> <li>remove the cut pieces from the laser sawing machine and clean the platform</li> <li>bag the cut pieces and label as per the company's procedure</li> <li>return to the supervisor for further processing</li> </ul> Return the uncut roughs if: <ul> <li>the alignment on the holder is not accurate</li> <li>there is anticipated problem with the planned cut such that sawing can lead to breakage</li> </ul>  |
|                      | <ul> <li>Follow safety procedures at work</li> <li>to ensure that the door of the laser machine is closed after placing the fixed rough and before starting the machine</li> <li>not to operate the machine while touching rough</li> <li>to wear proper safety equipment like gloves and eye glasses while working</li> <li>Report problems to the supervisor/reporting authority about</li> <li>impractical markings</li> <li>machine failures</li> </ul>   |







|  | reasons for anticipated delays that may adversely affect delivery   |  |  |  |
|--|---|--|--|--|
| Performance Criteria(PC) w.r.t. the Scope                              |   |  |  |  |
| Element  | Performance Criteria  |  |  |  |
| Quality of Cutting   | To be competent, the user/individual on the job must be able to:  |  |  |  |
|  | PC1. accurately cut the roughs along the markings   |  |  |  |
|  | PC2. accurately bag and label the roughs before returning   |  |  |  |
| Operating the Laser  | To be competent, the user/individual on the job must be able to:  |  |  |  |
| Sawing Machine   | PC3. accurately and securely place the dop / stage in the machine   |  |  |  |
|  | PC4. accurately align the laser cutting line with the marking for proper cut  |  |  |  |
|  | PC5. accurately enter the parameters such as dimensions in the computer   |  |  |  |
| Productivity   | To be competent, the user/individual on the job must be able to:  |  |  |  |
|  | PC6. achieve the productivity in terms of carats or number of pieces as set by the  |  |  |  |
|  | company   |  |  |  |
|  | PC7. achieve timely delivery for further processing   |  |  |  |
|  | PC8. maintain cycle time  |  |  |  |
| Controlling defects  | To be competent, the user/individual on the job must be able to:  |  |  |  |
|  | PC9. accurately assess that the marking is correct for the cut required   |  |  |  |
|  | PC10. minimize damage, weight loss and breakage   |  |  |  |
| Multitasking   | To be competent, the user/individual on the job must be able to:  |  |  |  |
|  | PC11. work on multiple machines at the same time  |  |  |  |
| Knowledge and Unders   | standing (K)  |  |  |  |
| B. Organizational  | The individual on the job needs to know and understand:   |  |  |  |
| Context  | KA1. company's policies on: acceptable limits of weight loss; incentives; delivery  |  |  |  |
|  |   |  |  |  |
| (Knowledge of the  | standards; safety practices and hazards; security and performance   |  |  |  |
| (Knowledge of the  | standards; safety practices and hazards; security and performance measurement   |  |  |  |
| company /  |   |  |  |  |
| company /<br>organization and  | measurement   |  |  |  |
| company /  | measurement<br>KA2. work flow involved in company's diamond processing process  |  |  |  |
| company /<br>organization and  | measurement<br>KA2. work flow involved in company's diamond processing process<br>KA3. importance of the individual's role in the workflow  |  |  |  |
| company /<br>organization and<br>its processes)                        | measurement<br>KA2. work flow involved in company's diamond processing process<br>KA3. importance of the individual's role in the workflow<br>KA4. reporting structure<br>KA5. issue return procedures followed by the company  |  |  |  |
| company /<br>organization and<br>its processes)<br><b>B. Technical</b> | measurement<br>KA2. work flow involved in company's diamond processing process<br>KA3. importance of the individual's role in the workflow<br>KA4. reporting structure<br>KA5. issue return procedures followed by the company<br>The user/individual on the job needs to know and understand:  |  |  |  |
| company /<br>organization and<br>its processes)                        | <ul> <li>measurement</li> <li>KA2. work flow involved in company's diamond processing process</li> <li>KA3. importance of the individual's role in the workflow</li> <li>KA4. reporting structure</li> <li>KA5. issue return procedures followed by the company</li> </ul> The user/individual on the job needs to know and understand: KB1. shape, cut, clarity, carat, and physical characteristics of the diamond  |  |  |  |
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|                        |                    | results  |
|------------------------|--------------------|--|
|                        |                    | KB14. how to maintain and prepare the tools as per job requirement   |
| Ski                    | lls (S) [Optional] |  |
| Α.                     | Core Skills/       | Reading and writing skills   |
| Generic Skills         |                    | The user/individual on the job needs to know and understand how:<br>SA1. to read descriptions on the job packets/ bags   |
|                        |                    | SA2. to enter data on the computer<br>SA3. to document work done for status and performance appraisal  |
|                        |                    | Calculation and geometry skills  |
|                        |                    | The user/individual on the job needs to know and understand how:<br>SA4. to judge the extent of rotation, zoom and angling required to cut along the<br>marking  |
|                        |                    | Communication skills   |
|                        |                    | The user/individual on the job needs to know and understand how:<br>SA5. to discuss task, schedules, and work-loads with co-workers and supervisors<br>SA6. to understand instructions and report problems |
|                        |                    | Teamwork and multitasking  |
|                        |                    | The user/individual on the job needs to know and understand how:<br>SA7. to share work load as required  |
|                        |                    | SA8. to assist others who require help   |
|                        |                    | SA9. to share knowledge with co-workers<br>SA10. to operate multiple machines as required or as instructed   |
| B. Professional Skills |                    | Understanding planning and marking   |
|                        |                    | The user/individual on the job needs to know and understand how:<br>SB1. the diamond has to be cut along the marking in order to achieve the planned cut   |
|                        |                    | Using tools and machines   |
|                        |                    | The user/individual on the job needs to know and understand how:<br>SB2. to work with computer and laser sawing machine<br>SB3. to maintain tools and machines used  |
|                        |                    | SB4. to work in a safe environment, i.e., without injuries   |
|                        |                    | Reducing loss  |
|                        |                    | The user/individual on the job needs to know and understand how:<br>SB5. to handle diamonds with care<br>SB6. to minimize damage or loss of any diamond during the cutting process                         |
|                        |                    | <ul><li>SB7. to report diamond losses via documentation as per company policy</li><li>SB8. to suggest improvements in order to reduce loss</li></ul>   |
|                        |                    | Decision making  |
|                        |                    | The user/individual on the job needs to know and understand how:   |
|                        |                    | SB9. to decide if a particular rough must be cut along the marking provided  |







| SB10. to determine what should be the order of the cut and which marking should be cut first to avoid breakage |
|--|
| Analytical thinking  |
| The user/individual on the job needs to know and understand how:   |
| SB11. to assess accuracy of the marking, alignment of doped rough  |
| SB12. to identify solutions to avoid delays because of machine failure   |
| Reflective thinking  |
| The user/individual on the job needs to know and understand how:   |
| SB13. to work for long hours in front of laser sawing machine and computer without health problems             |
| SB14. to minimise weight loss  |
| Problem solving  |
| The user/individual on the job needs to know and understand how:   |
| SB15. to rectify defects occurred in sawing  |
| Planning skills  |
| The user/individual on the job needs to know and understand how:   |
| SB16. to plan work for maximum productivity  |
| Innovative thinking  |
| The user/individual on the job needs to know and understand how:   |
| SB17. to devise new means of working to improve productivity   |
| SB18. to suggest different or innovative plans, which may yield higher returns for                             |
| the company  |
| Critical thinking  |
| The user/individual on the job needs to know and understand how:   |
| SB19. to spot process disruptions and delays   |







Cut the rough diamond using laser sawing machine

# **NOS Version Control**

| NOS Code                               | G&J/N4403          |                  |          |
|--|--------------------|------------------|----------|
| Credits(NVEQF/NVQF/NSQF)<br>[OPTIONAL] | TBD                | Version number   | 1.0      |
| Industry                               | Gems & Jewellery   | Drafted on       | 20/05/13 |
| Industry Sub-sector                    | Diamond Processing | Last reviewed on | 30/07/13 |
|  |                    | Next review date | 15/07/15 |

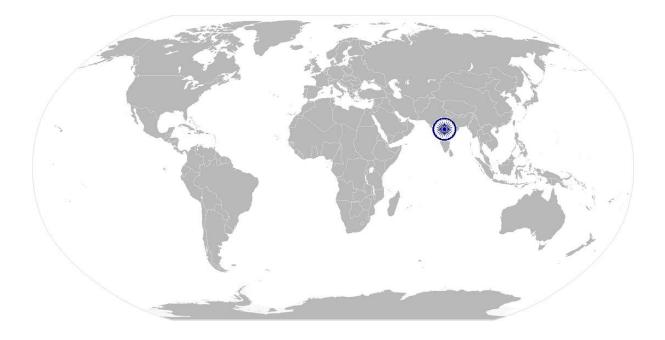






**Maintain IPR** 

# National Occupational Standard



## **Overview**

This unit is about and respecting intellectual property rights (IPR) of the company's products, policies, procedures and orders.



|          | NOS          | 2         |
|----------|--------------|-----------|
| National | Occupational | Standards |

**Maintain IPR** 



#### G&J/N9930

G&J/N9930

Unit Code

| Unit Title<br>(Task)         | Respect IPR of company  |  |  |
|------------------------------|---|--|--|
| Description                  | This OS unit is about maintaining company's intellectual property   |  |  |
| Scope                        | <ul> <li>This unit/task covers the following:</li> <li>Protect company's Intellectual Property Rights (IPR)</li> <li>prevent leak of new orders to competitors by reporting on time</li> <li>prevent leak of the manufacturing processes or the policies followed by the company</li> <li>be aware of any of company's product patents</li> </ul> |  |  |
| Performance Criteria(P       | • report IPR violations observed in the market, to supervisor or company heads  |  |  |
|                              |   |  |  |
| Element                      | Performance Criteria  |  |  |
| Respecting IPR               | <ul> <li>To be competent, the user/individual on the job must be able to:</li> <li>PC1. spot plagiarism and report</li> <li>PC2. understand rationale of patents and IPR</li> <li>PC3. avoid being involved in IPR violations</li> </ul>  |  |  |
| Knowledge and Unders         | standing (K)  |  |  |
| A. Organizational<br>Context | <ul> <li>The individual on the job needs to know and understand:</li> <li>KA1. company's policies on IPR, plagiarism and order leaks</li> <li>KA2. company's patented products</li> <li>KA3. market trends and company's unique product range</li> <li>KA4. reporting structure</li> </ul>  |  |  |
| B. Technical<br>Knowledge    | The individual on the job needs to know and understand:<br>KB1. basics of patents and IPR laws<br>KB2. how IPR protection is important for competitiveness of a company   |  |  |
| Skills (S) [Optional]        |   |  |  |
| A. Core Skills/              | Communication skills  |  |  |
| Generic Skills               | The user/individual on the job needs to know and understand how:<br>SA1. to effectively communicate any observed IPR violations or leaks  |  |  |
| B. Professional Skills       | Decision making   |  |  |
|                              | The user/individual on the job needs to know and understand when and how:<br>SB2. to report sources of IPR violations   |  |  |
|                              | Reflective thinking   |  |  |
|                              | The user/individual on the job needs to know and understand how:<br>SB3. to learn from past mistakes and report IPR violations on time  |  |  |
|                              | Critical thinking   |  |  |
|                              | The user/individual on the job needs to know and understand how:<br>SB4. to spot signs of violations and alert authorities in time  |  |  |







Maintain IPR

# **NOS Version Control**

| NOS Code                               | G&J/N9930          |                  |          |
|--|--------------------|------------------|----------|
| Credits(NVEQF/NVQF/NSQF)<br>[OPTIONAL] | TBD                | Version number   | 1.0      |
| Industry                               | Gems & Jewellery   | Drafted on       | 20/05/13 |
| Industry Sub-sector                    | Diamond Processing | Last reviewed on | 30/07/13 |
|  |                    | Next review date | 15/07/15 |

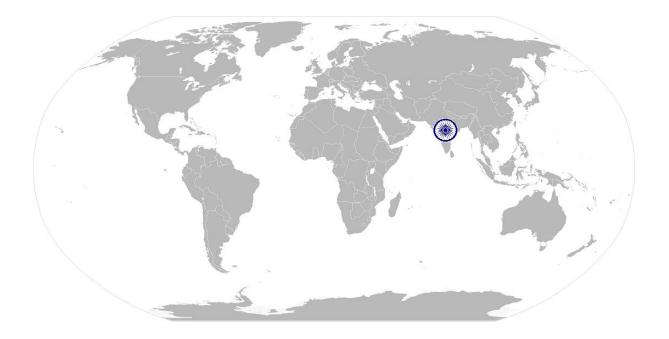






Coordinate with team and superiors

# National Occupational Standard



### **Overview**

This unit is about the work ethics, team work, and level of communication with colleagues or clients in the diamond processing industry. It determines the ability to work as a team member, share work and multi-task in order to achieve the required deliverables on schedule.







| G&J/N9931  | Coordinate with team and superiors   |
|--|--|
| Unit Code  | G&J/N9933  |
| Unit Title<br>(Task)   | Interact with colleagues and seniors   |
| Description  | This OS unit is about communicating with colleagues and seniors in order to maintain smooth ad hazards free work flow  |
| Scope  | <ul> <li>This unit/task covers the following:</li> <li>Interact with supervisor to:</li> <li>receive work instructions and raw materials from reporting supervisor</li> <li>communicate to reporting supervisor about process flow improvements, product defects received from previous process, repairs and maintenance of tools and machinery as required</li> <li>communicate any potential hazards or expected process disruptions</li> <li>handover completed work to supervisor</li> <li>Interact with colleagues within and outside the department to:</li> <li>work as a team with colleagues and share work as per their or own work load and skills</li> <li>work with colleagues of other departments</li> <li>communicate an discuss work flow related difficulties in order to find solutions with mutual agreement</li> <li>receive feedback from QC and rework in order to complete work on time</li> </ul> |
| Performance Criteria(P   | C) w.r.t. the Scope  |
| Element  | Performance Criteria   |
| Interaction with<br>supervisor   | <ul> <li>To be competent, the user/individual on the job must be able to:</li> <li>PC1. understand the work output requirements</li> <li>PC2. comply with company policy and rule</li> <li>PC3. deliver quality work on time as required by reporting any anticipated reasons for delays</li> </ul>  |
| Interactions with<br>colleagues and other<br>departments   | To be competent, the user/individual on the job must be able to:<br>PC4. put team over individual goals<br>PC5. conflicts resolution and multi-tasking   |
| Knowledge and Unders   |  |
| A. Organizational<br>Context<br>(Knowledge of the<br>company /<br>organization and<br>its processes) | The individual on the job needs to know and understand:<br>KA1. company's policies on personnel management<br>KA2. work flow involved in company's diamond processing<br>KA3. importance of the individual's role in the workflow<br>KA4. reporting structure  |
| B. Technical<br>Knowledge  | The individual on the job needs to know and understand:<br>KB1. how to communicate effectively<br>KB2. how to build team coordination  |



National Occupational Standards



#### G&J/N9931

| G&J/N9931             | Coordinate with team and superiors |  |
|-----------------------|------------------------------------|--|
| Skills (S) [Optional] |                                    |  |
| A. Core Skills/       | Teamwork and some multitasking     |  |

| •                     | <b>0</b>   |  |  |
|-----------------------|--|--|--|
| Generic Skills        | The individual on the job needs to know and understand how:                      |  |  |
|                       | SA1. to share work load as required  |  |  |
|                       | SA2. to deliver product to next work process on time                             |  |  |
| B. Professional Skill | s Decision making  |  |  |
|                       | The individual on the job needs to know and understand:                          |  |  |
|                       | SB1. how to report potential areas of disruptions to work process                |  |  |
|                       | SB2. when to report to supervisor and when to deal with a colleague depending on |  |  |
|                       | the type of concern  |  |  |
|                       | Reflective thinking  |  |  |
|                       | The individual on the job needs to know and understand:                          |  |  |
|                       | SB3. how to improve work process   |  |  |
|                       | Critical thinking  |  |  |
|                       | The individual on the job needs to know and understand:                          |  |  |
|                       | SB4. how to spot process disruptions and delays                                  |  |  |







Coordinate with team and superiors

# **NOS Version Control**

| NOS Code                               | G&J/N9931          |                  |          |
|--|--------------------|------------------|----------|
| Credits(NVEQF/NVQF/NSQF)<br>[OPTIONAL] | TBD                | Version number   | 1.0      |
| Industry                               | Gems & Jewellery   | Drafted on       | 20/05/13 |
| Industry Sub-sector                    | Diamond Processing | Last reviewed on | 30/07/13 |
|  |                    | Next review date | 15/07/15 |



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G&J/N9933

**Maintain safety** 

# National Occupational Standard

## **Overview**

This unit is about the worker's commitment towards reporting potential hazards and containing accidents in order to make the work environment safe for self and colleagues.







| G&J/N9933  | Maintain safety   |  |
|--|---|--|
| Unit Code  | G&J/N9933   |  |
| Unit Title<br>(Task)   | Maintain safety at work   |  |
| Description  | This OS unit is about being aware of and communicating potential hazards and dangers of accidents on the job  |  |
| Scope  | This unit/task covers the following:  |  |
|  | <ul> <li>Understand potential sources of accidents</li> <li>to avoid accidents related to use of potentially dangerous chemicals, gases, sharp tools and hazards from machines like rotating scaife, lasers, heating ovens, etc.</li> <li>Use safety gear to avoid accidents</li> <li>wear safety gear such as goggles, mask, gloves , jacket , etc. as prescribed for the job</li> <li>Understand the safety procedures followed by the company</li> </ul> |  |
|  | <ul> <li>such as fire drills, emergency/ evacuation procedures, first aid, etc., which will be helpful in case of an emergency</li> <li>Communicate to reporting supervisor about:</li> <li>process flow improvements to reduce anticipated or repetitive hazards</li> <li>mishandling of tools, machines or hazardous materials</li> <li>electrical problems that could result in accident</li> </ul>  |  |
| Performance Criteria(P   | C) w.r.t. the Scope   |  |
| Element  | Performance Criteria  |  |
| Understanding of<br>potential sources of<br>accidents and<br>communicating         | <ul> <li>To be competent, the user/individual on the job must be able to:</li> <li>PC1. spot and report potential hazards on time</li> <li>PC2. follow company policy and rules regarding hazardous materials</li> <li>PC3. deliver quality work on time as required by reporting any anticipated reasons for delays</li> </ul>   |  |
| Using safety gear  | To be competent, the user/individual on the job must be able to:<br>PC4. understand which safety gear must we used for a particular task  |  |
| Understanding of<br>safety procedures  | <ul> <li>To be competent, the user/individual on the job must be able to:</li> <li>PC5. understand and follow the evacuation procedure properly during a fire drill</li> <li>PC6. provide first aid to self or others in case of emergency</li> </ul>   |  |
| Knowledge and Understanding (K)  |   |  |
| A. Organizational<br>Context<br>(Knowledge of the<br>company /<br>organization and | <ul> <li>The individual on the job needs to know and understand:</li> <li>KA1. company's policies on handling: harmful chemicals and sharp tools, safety and hazards of machines, fire safety/drill, first aid and, disposal of harmful chemicals and materials</li> <li>KA2. work flow involved in company's diamond processing process</li> </ul>   |  |
| its processes)   | <ul><li>KA3. importance of the individual's role in the workflow</li><li>KA4. reporting structure</li></ul>   |  |



NOS National Occupational Standards



| G&J/N9933                 | Maintain safety   |  |
|---------------------------|---|--|
| B. Technical<br>Knowledge | The individual on the job needs to know and understand:<br>KB1. how different chemicals react and what could be the danger from them<br>KB2. how to use machines and tools without causing bodily harm<br>KB3. fire safety education<br>KB4. first aid execution<br>KB5. disposal of hazardous chemicals, tools and materials by following prescribed |  |
| Skills (S) [Optional]     | environmental norms or as per company policy  |  |
| A. Core Skills/           | Communication skills  |  |
| Generic Skills            | The individual on the job needs to know and understand how:   |  |
|                           | SA1. to effectively communicate the danger  |  |
| B. Professional Skills    | Decision making   |  |
|                           | The individual on the job needs to know and understand:   |  |
|                           | SB1. importance of reporting potential sources of danger  |  |
|                           | SB2. appropriate actions to be taken in the event of an accident  |  |
|                           | SB3. procedure for disposing of hazardous materials, safely and following environmental guidelines  |  |
|                           | Reflective thinking   |  |
|                           | The individual on the job needs to know and understand how:   |  |
|                           | SB4. to learn from past mistakes regarding use of hazardous machines, tools or chemicals  |  |
|                           | Critical thinking   |  |
|                           | The individual on the job needs to know and understand:   |  |
|                           | SB5. how to spot danger   |  |
|                           | SB6. procedure to follow in the event of a fire or other hazard   |  |







Maintain safety

# **NOS Version Control**

| NOS Code                               | G&J/N9933          |                  |          |
|--|--------------------|------------------|----------|
| Credits(NVEQF/NVQF/NSQF)<br>[OPTIONAL] | TBD                | Version number   | 1.0      |
| Industry                               | Gems & Jewellery   | Drafted on       | 20/05/13 |
| Industry Sub-sector                    | Diamond Processing | Last reviewed on | 30/07/13 |
|  |                    | Next review date | 15/07/15 |





| Keywords /Terms                         | Description   |  |
|---|---|--|
| Sector                                  | Sector is a conglomeration of different business operations having similar business and interests. It may also be defined as a distinct subset of the economy whose components share similar characteristics and interests.   |  |
| Sub-sector                              | Sub-sector is derived from a further breakdown based on the characteristics and interests of its components.  |  |
| Occupation                              | Occupation is a set of job roles, which perform similar/ related set of functions in an industry.   |  |
| Function                                | Function is an activity necessary for achieving the key purpose of the sector, occupation, or an area of work, which can be carried out by a person or a group of persons. Functions are identified through functional analysis and form the basis of OS.   |  |
| Sub-function                            | Sub-functions are sub-activities essential to fulfil the achieving the objectives of the function.  |  |
| Job role                                | Job role defines a unique set of functions that together form a unique employment opportunity in an organisation.   |  |
| Occupational Standards<br>(OS)          | OS specify the standards of performance an individual must achieve<br>when carrying out a function in the workplace, together with the<br>knowledge and understanding they need to meet that standard<br>consistently. Occupational Standards are applicable both in the Indian<br>and global contexts. |  |
| Performance Criteria                    | Performance criteria are statements that together specify the standard of performance required when carrying out a task.  |  |
| National Occupational<br>Standards (OS) | NOS are occupational standards which apply uniquely in the Indian context.  |  |
| Qualifications Pack (QP)                | QP comprises the set of OS, together with the educational, training and other criteria required to perform a job role. A QP is assigned a unique qualifications pack code.  |  |
| Unit Code                               | Unit code is a unique identifier for an Occupational Standard, which is denoted by an 'N'   |  |
| Unit Title                              | Unit title gives a clear overall statement about what the incumbent should be able to do.   |  |
| Description                             | Description gives a short summary of the unit content. This would be<br>helpful to anyone searching on a database to verify that this is the<br>appropriate OS they are looking for.  |  |
| Scope                                   | Scope is a set of statements specifying the range of variables that an individual may have to deal with in carrying out the function which have a critical impact on quality of performance required.   |  |
| Knowledge and                           | Knowledge and understanding are statements which together specify the   |  |
| Understanding                           | technical, generic, professional and organisational specific knowledge that an individual needs in order to perform to the required standard.   |  |
| Organisational Context                  | Organisational context includes the way the organisation is structured<br>and how it operates, including the extent of operative knowledge<br>managers have of their relevant areas of responsibility.  |  |
| Technical Knowledge                     | Technical knowledge is the specific knowledge needed to accomplish  |  |

Definitions





|                      | specific designated responsibilities.  |
|----------------------|--|
| Core Skills/ Generic | Core skills or generic skills are a group of skills that are the key to learning |
| Skills               | and working in today's world. These skills are typically needed in any           |
|                      | work environment in today's world. These skills are typically needed in          |
|                      | any work environment. In the context of the OS, these include                    |
|                      | communication related skills that are applicable to most job roles.              |
| Keywords /Terms      | Description  |
| IPR                  | Intellectual Property Rights   |
| NOS                  | National Occupational Standard(s)  |
| NVQF                 | National Vocational Qualifications Framework                                     |
| NSQF                 | National Qualifications Framework  |
| NVEQF                | National Vocational Education Qualifications Framework                           |
| QP                   | Qualifications Pack  |

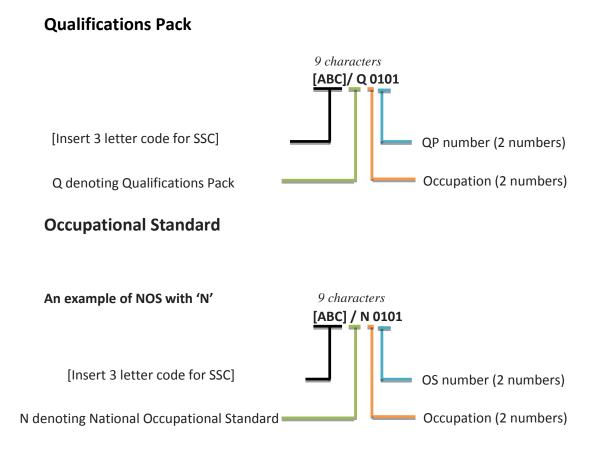


Qualifications Pack For Laser Sawing Machine Operator



## <u>Annexure</u>

### Nomenclature for QP and NOS



Back to top...





The following acronyms/codes have been used in the nomenclature above:

| Sub-sector                           | Range of Occupation numbers |  |  |
|--------------------------------------|-----------------------------|--|--|
| Handmade gold and gems-set jewellery | 01-20                       |  |  |
| Cast and diamond-set jewellery       | 21-40                       |  |  |
| Diamond processing                   | 41-60                       |  |  |
| Gemstone processing                  | 61-80                       |  |  |
| Jewellery retailing                  | 81-98                       |  |  |

| Sequence         | Description                       | Example |
|------------------|-----------------------------------|---------|
| Three letters    | Industry name                     | G&J     |
| Slash            | /                                 | /       |
| Next letter      | Whether <b>Q</b> P or <b>N</b> OS | Q       |
| Next two numbers | Occupation code                   | 44      |
| Next two numbers | OS number                         | 04      |





|   |                                       | CRITERIA FOR ASSESSMENT OF TRAINEES  |        |            |
|---|---------------------------------------|--|--------|------------|
| Job Role<br>Qualification Pack                                    | -                                     | Laser Sawing Machine Operator<br>Diamond Processing - Laser Sawing Machine Operator        |        |            |
| Sector Skill Council  |                                       | GEMS & JEWELLERY   | r      |            |
|   |                                       | Assessment Strategy  | Marks  | Allocation |
| NOS   | Elements                              | Performance Criteria   | Theory | Practical  |
|   | Setting rough in the holder           | PC1. accurately and securely fix rough as per the planned cut                              | 1      | 3          |
|   |                                       | PC2. accurately align and level the rough as per marking                                   | 1      | 3          |
| 1. G&J/N4401 Fix rough<br>diamond on dop or<br>cassette or holder | Productivity                          | PC3. achieve the productivity in terms of carats or number of pieces as set by the company | 0      | 4          |
|   |                                       | PC4. timely delivery for further processing  | 0      | 3          |
|   | Controlling defects                   | PC5. ensure no damage to the rough during fixing process                                   | 0      | 3          |
|   |                                       | Sub Total  | 2      | 16         |
|   | Quality of Cutting                    | PC1. accurately cut the roughs along the markings  | 1      | 8          |
|   |                                       | PC2. accurately bag and label the roughs before returning                                  | 1      | 5          |
|   | Operating the Laser Sawing<br>Machine | PC3. accurately and securely place the dop / stage in the machine                          | 0      | 5          |
|   |                                       | PC4. accurately align the laser cutting line with the marking for proper cut               | 0      | 5          |
| 2. G&J/N4403 Cut rough  |                                       | PC5. accurately enter the parameters such as dimensions in the computer                    | 1      | 5          |
| diamond using laser   | Productivity                          | PC6. achieve the productivity in terms of carats or number of pieces as set by the company | 1      | 8          |
| sawing machine  |                                       | PC7. achieve timely delivery for further processing  | 0      | 5          |
|   |                                       | PC8. maintain cycle time   | 0      | 5          |
|   | Controlling defects                   | PC9. accurately assess that the marking is correct for the cut required                    | 1      | 5          |
|   |                                       | PC10. minimize damage, weight loss and breakage  | 1      | 5          |
|   | Multitasking                          | PC11. work on multiple machines at the same time   | 0      | 5          |
|   |                                       | Sub Total  | 6      | 61         |
| 3.G&J/N9930 Maintain<br>IPR                                       | Respecting IPR                        | PC1. Spot plagiarism and report  | 1      | 0          |
|   |                                       | PC2. Understand rationale of patents and IPR   | 1      | 0          |





|   |   | PC3. Avoid being involved in IPR violations   | 1  | 0   |
|---|---|---|----|-----|
|   |   | Sub Total   | 3  | 0   |
|   | Interaction with supervisor                                       | PC1. Understand the work output requirements  | 1  | 0   |
|   |   | PC2. Comply with company policy and rule  | 1  | 0   |
| 4. G&J/N9931<br>Coordinate with others      |   | PC3. Deliver quality work on time as required by reporting any anticipated reasons for delays | 0  | 2   |
|   | Interactions with colleagues<br>and other departments             | PC4. Put team over individual goals   | 1  | 0   |
|   |   | PC5. Conflicts resolution and multi-tasking   | 1  | 0   |
|   |   | Sub Total   | 4  | 2   |
| 5. G&J/N9933 Maintain safe work environment | Understanding of potential sources of accidents and communicating | PC1. Spot and report potential hazards on time  | 1  | 0   |
|   |   | PC2. Follow company policy and rules regarding hazardous materials                            | 1  | 0   |
|   |   | PC3. Deliver quality work on time as required by reporting any anticipated reasons for delays | 1  | 0   |
|   | Using safety gear   | PC4. understand which safety gear must we used for a particular task                          | 0  | 1   |
|   | Understanding of safety procedures                                | PC5. understand and follow the evacuation procedure properly during a fire drill              | 1  | 0   |
|   |   | PC6. provide first aid to self or others in case of emergency                                 | 1  | 0   |
|   |   | Sub Total   | 5  | 1   |
|   |   | Total   | 20 | 80  |
|   |   | Grand Total   |    | 100 |