Title	**Make ready and produce single process work for reel-fed printing**
Level	3	**Credits**	50

Purpose	People credited with this unit standard are able to: check documentation and confirm requirements for the job are available; position and secure image carrier/s on a reel-fed press; select, mix and match inks for reel-fed printing; pre-set the inking system on a reel-fed press; carry out other make ready tasks in preparation for taking a print; set the register systems on a reel-fed press; take a print and prepare for production run; produce single process work on a reel-fed press; use quality control equipment and guides; recognise and report problems encountered during the print run; check job is completed before wash-up is commenced and undertake post-press tasks.

Classification	Printing > Printing - Reel-Fed

Available grade	Achieved

Prerequisites	Unit 340, *Demonstrate knowledge of safe working practices in the print industry,* or demonstrate equivalent knowledge and skills.

Guidance Information

1   Legislation, regulations and/or industry standards relevant to this unit standard
     include but are not limited to the:
      • Hazardous Substances and New Organisms Act 1996;
      • Health and Safety at Work Act 2015;
      • Privacy Act 2020;
      • Resource Management Act 1991.

     Any new, amended or replacement Acts, regulations, standards, codes of practice,
     guidelines, or authority requirements or conditions affecting this unit standard will
     take precedence for assessment purposes, pending review of this unit standard.

2   Definitions
     Job documentation refers to the documentation that is used in the workplace that
     contains the instructions and requirements for a particular production job. This may
     include but is not limited to workplace orders, production orders, workplace
     specifications, samples, lay cards or proof.

Job requirements refer to specific requirements for the print job at hand. These requirements may or may not be covered in the job documentation and may include special instructions, quality requirements expected by the customer, and/or production standards as set down by the print workplace and/or organisation.
Single process production jobs – may include web, basic four colour process or spot colours. They do not include embellishments or lamination, encoding, re-passing or after-processes except a single die cutting station.
Workplace procedures refer to organisation policies and procedures that are documented in memo, electronic, or manual format and available in the workplace. They may include but are not limited to – standard operating procedures, site specific procedures, site safety procedures, equipment operating procedures, quality assurance procedures, product quality specifications, manufacturer's requirements, references, approved codes of practice, housekeeping standards, environmental considerations, on-site briefings, supervisor's instructions, and procedures to comply with legislative and local body requirements relevant to the print sector.

3   It is recommended that people hold credits for Unit 16513, *Web up a reel-fed printing press*; Unit 16512, *Set up an infeed system on a reel-fed printing press*; Unit 26310, *Undertake pre-make ready for reel-fed printing*; and Unit 26311, *Wash up a reel-fed printing press* before being assessed against this unit standard.

4   Assessment information
Candidates undertaking assessment against this unit standard must provide evidence of normal colour vision.

Candidates must provide evidence of being responsible for making ready and running the press to produce single process production jobs.

Evidence presented for assessment against this unit standard must be consistent with safe working practices and be in accordance with applicable service information, workplace procedures and legislative requirements.

Outcomes and performance criteria

Outcome 1

Check documentation and confirm requirements for the job are available.

Performance criteria

1.1   Check job documentation to ensure all specifications for the process being undertaken are complete, and report any discrepancies.

1.2   Check required job components against job documentation and confirm their availability.

1.3   Confirm equipment is available, as determined by the job documentation.

Outcome 2

Position and secure image carrier/s on a reel-fed press.

Performance criteria

2.1   Confirm image carrier/s are correct for the job before proceeding to secure on the press.

2.2   Position image carrier/s and secure on the press to meet the press and job requirements. Carry out or report any required adjustments.

2.3   Identify any faults on image carriers and rectify or report faults.

          Range   faults may include but are not limited to – incorrect exposure or development, image defects, poor contact, incorrect image positioning, missing register mark.

Outcome 3

Select, mix and match inks for reel-fed printing.

Performance criteria

3.1   Select inks to meet substrate, press and job requirements.

          Range   may include but is not limited to – drying properties, transparency, colourfastness, scuff, odour-free, bleed problems, substrate, gloss, colour, opacity, overprint finish, laser printer compatibility, toxicity, foil stamping.

3.2   Mix inks using colour mixing and matching systems available in the workplace.

Outcome 4

Pre-set the inking system on a reel-fed press.

Performance criteria

4.1   Add correct amount of ink to the duct to achieve required colour consistency.

4.2   Set ink delivery system and ink up rollers to meet the requirements of the image on the image carrier.

          Range   duct, ink flow, duct roller sweep.

Outcome 5

Carry out other make ready tasks in preparation for taking a print.

Performance criteria

5.1 Set web tensions to meet job requirements.

Range may include but is not limited to – web, rewind, unwind, web break detectors.

5.2 Set rollers and/or blades on the press and rectify or report any faults.

5.3 Check and set drying systems on the press to meet the job requirements.

Range may include but is not limited to – open flame, hot air, infrared (IR), ultraviolet (UV), combination dryer.

5.4 Check and set auxiliary equipment to meet the job requirements.

Range may include but is not limited to – folder, numbering unit, encoding unit, punching unit, creasing unit, diecutting unit, perforating unit, foil stamping, silicon system.

5.5 Set end finishing units to meet the job requirements.

Range may include but is not limited to – collator, gluer, rewinder, sheeter, folder.

5.6 Rectify or report any faults found in the make ready of the various systems on the press.

Outcome 6

Set the register systems on a reel-fed press.

Performance criteria

6.1 Set and adjust register systems on the press to meet job requirements.

Range manual or automatic.

6.2 Report or rectify faults found when setting the register systems.

Outcome 7

Take a print and prepare for production run.

Performance criteria

7.1 Take print and check against job documentation.

Range image transfer, image defects, positioning, colour, clarity of print.

7.2 Pass print for production.

7.3   Check counter and delivery systems to ensure job requirements are met, and counters are set ready for start of run.

Outcome 8

Produce single process work on a reel-fed press.

Performance criteria

8.1   Follow press start-up and shut-down procedures.

8.2   Print multi colour work to meet job requirements and maintain production standards and quality throughout the run.

8.3   Monitor reel stand and in-feed systems and adjust to provide continuous operation throughout the run.

8.4   Check lubricating system during the print run to maintain smooth operation of the press.

8.5   Monitor image carrier condition throughout the run.

8.6   Monitor and adjust ink throughout the run.

8.7   Monitor and adjust impression and image transfer systems throughout the run.

8.8   Monitor and adjust drying systems as necessary throughout the run.

8.9   Monitor and adjust rewind or finishing processes throughout the run.

8.10   Monitor print standards against the approved sample.

           Range   may include but is not limited to – colour variation, registration, picking, ghosting, tracking, dot gain, set-off, ink adhesion.

Outcome 9

Use quality control equipment and guides.

Performance criteria

9.1   Use quality control guides to maintain the required production standards and quality throughout the run.

           Range   may include but is not limited to – quality control strips, densitometer, web viewer, approved sample, spectrophotometer, gas chromatograph, bar code scanner.

9.2   Maintain product bar code tolerances throughout the print run.

           Range   readability, printing tolerances.

Outcome 10

Recognise and report problems encountered during the print run.

Performance criteria

10.1   Rectify or report static electricity problems.

Range   may include but is not limited to – web breaks, web wandering, misregister, set-off, fire hazards.

10.2   Rectify or report problems encountered during the print run.

Range   may include but is not limited to – dirty print, set-off, ghosting, gear marks, over/under impression, slur, show-through, ink contamination, retarded ink drying, bleeds, creasing, misregister, tracking, doctor blade faults and blocking, strike-through (printing on paper), scumming, haze, hickies, catch up (lack of water on plates), piling (build up of ink on edges).

Outcome 11

Check job is completed before wash-up is commenced and undertake post-press tasks.

Performance criteria

11.1   Check quantity printed and other job requirements against job documentation before wash-up is commenced and rectify any discrepancies in quantity.

11.2   Explain correct shut-down sequence.

11.3   Complete job documentation and note amendments and variations for future reference.

11.4   Carry out other post-press tasks are as required by the job documentation.

Range   may include but is not limited to – prepare for forwarding to next process, file image carrier/s.

Planned review date	31 December 2027

Status information and last date for assessment for superseded versions

Process	Version	Date	Last Date for Assessment
Registration	1	18 June 2010	31 December 2027
Review	2	30 March 2023	N/A
Revision	3	27 February 2025	N/A

| Consent and Moderation Requirements (CMR) reference | 0013 |

This CMR can be accessed at http://www.nzqa.govt.nz/framework/search/index.do.

Comments on this unit standard

Please contact Hanga-Aro-Rau Manufacturing, Engineering and Logistics Workforce Development Council qualifications@hangaarorau.nz if you wish to suggest changes to the content of this unit standard.