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# Fixed Plant and People Interaction
## Guide and Critical Risk Standard

Safety is everyone's responsibility

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HEALTH SAFETY ENVIRONMENT

SCAN BEFORE YOU BEGIN

FIXED PLANT AND PEOPLE

# Fixed Plant and People Guide

Safety is everyone's responsibility

# Check before you begin

- **Is the fixed plant suitable for this work and in a safe condition?** Has a Plant Risk Assessment been conducted for this application? Is it free from temperature variations, dust or corrosion that might stop it operating safely? Are operational controls clearly labelled?

- **Are you a Competent person assessed to do this work?** Is this your first unsupervised use of this machine? Have any changes been made to the machine since you last used it? Have work methods changed? If so, **DO NOT** start work until you have been assessed by a qualified trainer. Ask your supervisor: "Do I need refresher training?"

- **Do you understand how to operate this plant?** Have you read and understood the Safe Operating Procedure? Are you clear on the specific hazards and controls? Do you know the safe work methods for cleaning, servicing and adjusting the plant?

- **Have you completed the Thales pre-start checklist?** Are the guards correctly positioned? Are warning devices, interlocks and other safety functions operational?

Any faulty equipment must be tagged, locked out or secured to prevent inadvertent operation. **Report all hazards or unsafe working practices immediately.**

## If you are a contractor

- Do you have the correct work license?
- Have you been inducted to carry out this inspection, repair or maintenance?

## If working with high risk fixed plant

- Is it secured to prevent unauthorised use?
- Has it been assessed by independent specialists against AS 4024?
- If operating or maintaining the plant under remote or isolated conditions, are you using a 'buddy system'? Do you have additional communications and safety controls, like duress alarms?
- If you could be exposed to hazardous mechanical movements or energy sources, has the plant been isolated and locked out?

# When operating fixed plant

- Only use emergency stops in an emergency. (Activating an emergency stop will trigger an incident response.)
- If you need to access guarded areas, protect yourself from moving machinery or energy sources with an interlocked physical barrier or a presence-sensing safeguarding system.

# Fixed Plant and People
## Critical Risk Standard

Safety is everyone's responsibility

# Contents

# Introduction

The Thales Australia Life Saving Controls describe the minimum requirements for controlling each of the critical work health and safety risks that are common to our operations and workplaces. The Life Saving Controls provide a high level framework for managing health and safety hazards.

## Scope

This Life Saving Control describes the Critical Controls for fixed plant activities and applies to all Thales sites and operations.

The intent is to eliminate or minimise the risk of fatalities and serious injuries arising from tasks involving the following fixed plant:

- Manufacturing machinery
- Test machinery
- Jobbing machinery, such as presses and punches
- Workshop tools and machinery, such as lathes, pedestal and grinders
- Conveyor systems

**High Risk Fixed Plant**

Where these Life Saving Controls refer to “High Risk Fixed Plant”, this includes fixed plant where a risk assessment has determined that incorrect operation can lead to a fatality or life altering injury.

Where Thales Australia does not have control of the worksite or is working under a client’s safety management system, then:

- The client’s standards shall be applied if they are equal or higher, and
- The Thales Australia Standard shall be applied for all aspects where the client’s system is “silent”.

If the client’s standards are lower and this presents a material risk then this must be escalated with the Thales Australia Project Manager.

## What if a Critical Control Cannot Be Applied?

If for any reason there are circumstances where the Minimum Requirement for a Critical Control cannot be met, then a formal Control Standard variation is required.

Deviation from the requirements set out in each Control Standards shall be formally approved by a variation which involves:

- A documented and detailed risk assessment of the situation;
- A documented recommendation supported by the Business Safety Manager;
- A documented recommendation from a Technical Expert where appropriate; and
- Formal approval from the Business General Manager or Business Vice President that the level of risk as a result of the alternate control measures is understood, and considered acceptable to the organisation.

## Contracted Work

Contracted workers and their Supervision must be inducted in this Critical Risk Standard.

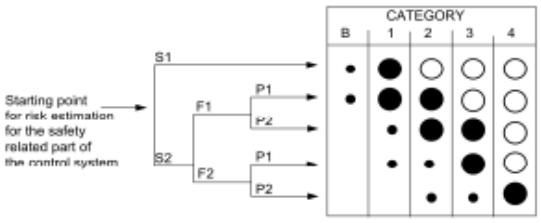
Contractors are required to meet or exceed this Standard when undertaking work for Thales Australia Where there is a risk of fatalities and serious injuries arising from falls from height and dropped objects during working at heights activities.

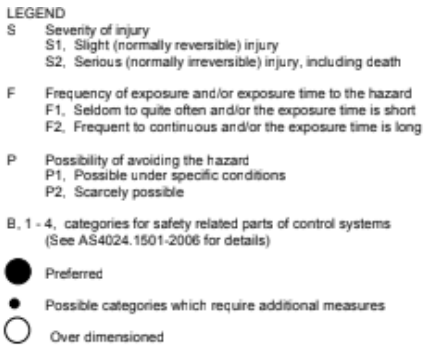
# Definitions

The following terms are used in this Risk Standard. Additional definitions can be found in the reference documents.

| | |
|---|---|
| Critical Risk | A risk where there is potential for a fatality or life-altering injury. |
| Critical Control | A control that is crucial to preventing the event or mitigating the consequences of the event. The absence or failure of a critical control would significantly increase the risk despite the existence of the other controls. |
| Minimum Requirements | Aspects of the Critical Control that must be applied in all Thales Australia controlled operations. |
| Additional Requirements | Aspects of the Critical Control that may be applied based on a site-specific or task-specific risk assessment. |
| Elevating Work Platform (EWP) | EWPs are powered mobile plant designed to lift or lower people and equipment by a telescopic, hinged or articulated device, or any combination of these, from a base support. EWPs can move over a supporting surface without the need for fixed runways.<br>There are various types of EWPs, including but not limited to:<br>• Scissor lift<br>• Boom lift<br>• Trailer lift<br>• Truck or vehicle mounted lift<br>• Vertical mast lift |
| Competent Person | A person who has acquired through training, qualification, competency or experience the knowledge and skills to carry out the task. |
| SWMS | Safe Work Method Statement |
| JSEA | Job Safety and Environment Analysis |
| Secondary Crush Protection | Secondary Crush Protection is a secondary protection barrier or device that provides the EWP operator/s protection against potential crush injuries. Examples of these barriers are as follows:<br>• physical barriers attached to the platform, which reduce the likelihood of employees being crushed against structures<br>• pressure sensing devices positioned over the control panel, which detect pending crush incidents and prevent further hazardous movements<br>• proximity sensing devices which prevent an EWP's platform from maneuvering into high-risk areas near to fixed structures. |

| | |
|---|---|
| Fixed Plant | These Life Saving Controls apply to the following fixed plant:<br>• Manufacturing machinery.<br>• Test machinery, training rigs and simulators.<br>• Jobbing machinery, such as presses and punches.<br>• Workshop tools and machinery, such as lathes, pedestal drills and grinders.<br>• Conveyor systems |
| High Risk Plant | Where these Life Saving Controls refer to "High Risk Fixed Plant", this includes fixed plant where a risk assessment has determined that incorrect operation can lead to a fatality of life-altering injury. |
| OEM | Original Equipment Manufacturer |



# Fixed Plant and People Interaction Safety Critical Controls

The minimum requirements for Fixed Plant and People Interaction from causing serious injury or fatality are:

| | |
|---|---|
| ***FP1*** | All operators of fixed plant are assessed for fitness and competency, and are authorised to operate specific machinery. |
| ***FP2*** | All fixed plant and consumables are suitable for the task. |
| ***FP3*** | The safe operation of fixed plant is described in accessible and easy to understand procedures. |
| ***FP4*** | All fixed plant must be subject to pre-start checks, inspections and maintenance in accordance with Australian Standards, OEM specifications, or equivalent. |
| ***FP5*** | All fixed plant shall be housed in a suitable operating environment. |
| ***FP6*** | All cleaning, servicing and maintenance work is to be conducted on isolated fixed plant. |
| ***FP7*** | Change management processes must be applied to alterations of fixed plant. |
| ***FP8*** | All fixed plant must be guarded to protect the operator from injury. |
| ***FP9*** | Operating controls and warning devices are accessible, easy to understand and use. |
| ***FP10*** | Where they are used, contractors safely service and maintain fixed plant to ensure its ongoing safety and suitability. |

# FP1 Fit, competent and authorized operators

All operators of fixed plant are assessed for fitness and competency, and are authorised to operate specific machinery.

## MINIMUM REQUIREMENTS

- Operators of fixed plant must be assessed for competency prior to the first unsupervised use of a machine and subsequently when there are changes to the machine or work methods.
- Supervisors must undergo training in their responsibilities for overseeing fixed plant operations, including the action to be taken to address unsafe work practices.
- Where fixed plant is used in the manufacture and handling of Explosive Ordnance (EO), the number and exposure of personnel must be minimised.

## ADDITIONAL REQUIREMENTS

- Competency should be assessed by a competent supervisor of subject matter expert following a process defined by a qualified trainer. The extent of the competency assessment should be based on the risk of the machine.
- High risk fixed plant should be secured to prevent unauthorised use.
- Operators of high risk fixed plant should receive refresher training at a frequency defined by the site.
- Operators of high risk fixed plant should be subject to regular fitness for work assessments as defined by the site.

## NOTES AND REFERENCES

- Operators including apprentices and new tradesperson should have supervision while undergoing training.

# FP2 Fit for Purpose Fixed Plant

All fixed plant and consumables are suitable for the task.

## MINIMUM REQUIREMENTS

- All fixed plant must have a current Plant Risk Assessment covering the full scope of applications.
- Independent specialists should be engaged to conduct an assessment of **high risk fixed plant** against AS 4024 in its place of work.
- All other fixed plant must be risk assessed in accordance with AS 4024 or international equivalent by a subject matter expert to ensure the safety related parts of the control system meet the preferred category of protection.
- Prior to acquisition, all fixed plant must be subject to a pre-purchase risk assessment with input from end users.
- Only fit for purpose parts and consumables must be used as directed by Safe Operating Procedures or OEM Manuals.
- Any change to plant operations that is not “Like for Like” must be subject to the Thales Change Management Instruction

## ADDITIONAL REQUIREMENTS

- Independent specialists should be engaged to conduct the assessment of **high risk fixed plant** against AS 4024.
- Stock levels of fixed plant parts and consumables should be maintained based on predicted workflow to prevent non-compliant part substitutions.

NOTES AND REFERENCES

- Plant Risk Assessments must be in accordance with 83392245-HSE-AUS-EN. In accordance with the Code of Practice How to Manage Work Health and Safety Risks, Plant Risk Assessments are not required where the “hazards and their associated risks are well known and have well established and accepted control measures” and the control measures are implemented. This could apply, for example, to a pedestal drill or bench grinder used for their intended purpose.
- Where there is documented evidence that fixed plant that has been purchased from a reputable supplier and designed to meet AS 4024 or an equivalent standard, then a risk assessment to determine the category of the control system is not required.

# FP3 Safe Work Methods

The safe operation of fixed plant is described in accessible and easy to understand procedures.

## MINIMUM REQUIREMENTS

- The safe method for operating fixed plant must be described in Safe Operating Procedures which have been independently checked and authorised.
- In addition to routine operation, the Safe Operating Procedure must describe safe work methods for cleaning, servicing and adjusting fixed plant which has potential to expose an operator to hazardous moving parts.
- Safe Operating Procedures must describe personnel limits for all tasks where EO are processed or handled using fixed plant to meet security requirements whilst minimising exposure.

## ADDITIONAL REQUIREMENTS

- Unless the operating hazards are are well known and have well established and accepted control measures, and these controls are implemented**,** Safe Operating Procedures must be based on a Plant Risk Assessment.
- Safe Operating Procedures should:
  - Cleary state specific hazards and controls
  - Be visual and brief rather than long and wordy
  - Be easy to understand by differing levels of literacy
  - Be located close to the machine.

## NOTES AND REFERENCES

- Sites must determine what level of “independence” is appropriate based on the risk of the fixed plant operation.

# FP4 Pre-Starts, inspections and maintenance

All fixed plant must be subject to pre-start checks, inspections and maintenance in accordance with Australian Standards, OEM specifications, or equivalent.

## MINIMUM REQUIREMENTS

- Pre-start checks must be conducted according to procedures to identify faults or conditions in fixed plant that may lead to a failure.
- Pre start checklists must be written to align with Australian standards in accordance with OEM requirements or an equivalent standard.
- Fixed plant must be inspected by a competent person
- Fixed plant inspections and maintenance must include:
    - guarding
    - emergency stops
    - warning devices
    - interlocks and other safety functions.
- Faulty equipment must be tagged and locked out, or otherwise secured, to prevent inadvertent operation.
- Maintenance logs must be current with no open safety-related deficiencies.

## ADDITIONAL REQUIREMENTS

- Where there is no applicable Australian standard, the equivalent international standard should be used
- Fixed plant that is idle for long periods should have re-commissioning procedures that follow OEM or equivalent requirements.

## NOTES AND REFERENCES

Add reference to relevant standards

# FP5 Suitable Operating Environment

All fixed plant shall be housed in a suitable operating environment.

## MINIMUM REQUIREMENTS

- Fixed plant is installed so as to provide sufficient access for operations, service and maintenance.
- Fixed plant must be installed with consideration to an operating environment that is free from temperature variations, dust, corrosion or other factors that will affect it's safe operation.
- Access must be restricted in areas where high risk fixed plant is in operation.
- A "buddy system" must be applied where high risk fixed plant are operated or maintained under remote or isolated conditions.

## ADDITIONAL REQUIREMENTS

- Where work is remote or isolated, operators should be provided with additional communications and safety controls such as duress alarms.

## NOTES AND REFERENCES

- Access may be restricted by perimeter or building security as determined by the Plant Risk Assessment.

# FP6 Isolation and Lockout

All cleaning, servicing and maintenance work is to be conducted on isolated fixed plant.

## MINIMUM REQUIREMENTS

- Guarding must not be removed from fixed plant unless it has been isolated following a documented method which has been independently checked and authorised.
- Whenever guarding is removed, each person exposed to the hazards of fixed plant must be protected from mechanical movement and other energy sources by their own personal lock.
- Where monitoring, adjusting or troubleshooting requires fixed plant to be operated without guards in place, then:
    - The safe work method must be documented in a Safe Operating Procedure or JSEA.
    - The operator(s) must be a qualified tradesperson and it is a requirement of their role.
    - The safe work method includes the use of specialised tools where appropriate to separate the operator from the hazardous moving parts of the machine.
    - The operator does not work alone.

## ADDITIONAL REQUIREMENTS

- High risk fixed plant should be isolated and locked out whenever there is potential for the operator to be exposed to hazardous mechanical movements or other energy sources unless:
    - The fixed plant is being operated as designed, and
    - The safety-related parts of the control systems are Category 3 or better
    - Guarding meets the requirements of AS 4024.

## NOTES AND REFERENCES

Refer to relevant standards

# FP7 Change Management

Change management processes must be applied to alterations of fixed plant.

## MINIMUM REQUIREMENTS

- Safety in design and management of change processes must be applied to any alteration of fixed plant with the potential to impact it's safe operation.
- All alterations to fixed plant must be authorised.
- The configuration of safety related controls and circuits must be maintained by applying a "like-for-like" approach to parts replacement. Where "like-for-like" replacement cannot be achieved, the Thales Change Management Instruction must be applied.
- End users must be consulted regarding any proposed change to fixed plant or it's operation.
- Any change to fixed plant must include a Plant Risk Assessment and JSEA to ensure that a new risk is not being introduced

## ADDITIONAL REQUIREMENTS

## NOTES AND REFERENCES

Thales Management of Change Instruction

# FP8 Guarding

All fixed plant must be guarded to protect the operator from injury.

## MINIMUM REQUIREMENTS

- Guarding must be:
  - a **permanently fixed barrier**, or
  - if access to guarded areas is necessary during operation, maintenance or cleaning, an **interlocked physical barrier**, or
  - if this is not reasonably practicable, **a physical barrier that can only be altered or removed using a tool**, or
  - if this is not reasonably practicable, **a presence-sensing safeguarding system**.
- All fixed plant must be assessed to ensure the guarding meets the requirements of AS 4024 or international equivalent by a subject matter expert.

## ADDITIONAL REQUIREMENTS

- Guards should be marked where appropriate to highlight that they are correctly positioned.
- Where guarding has the potential to impede the work, this should be subject to more frequent inspections.
- Independent specialists should be engaged to conduct the assessment of high risk fixed plant against AS 4024.

## NOTES AND REFERENCES

- Where there is documented evidence that fixed plant that has been purchased from a reputable supplier and designed to meet AS 4024 or an equivalent standard, then an assessment of the guarding is not required.

# FP9 Operational Controls and Warning Devices

Operating controls and warning devices are accessible, easy to understand and use.

## MINIMUM REQUIREMENTS

- Operational controls must be clearly labelled and designed to prevent inadvertent operation.
- All fixed plant must be assessed by a subject matter expert to ensure the operating controls, warning devices and emergency stops meet the requirements of AS 4024 or international equivalent.
- Emergency stops must only be used for emergencies.
- Signage must meet relevant Codes and Standards, including AS 1319.

## ADDITIONAL REQUIREMENTS

- The activation of an emergency stop should trigger an incident response.

## NOTES AND REFERENCES

- Independent specialists should be engaged to conduct the assessment of high risk fixed plant against AS 4024.
- Where there is documented evidence that fixed plant that has been purchased from a reputable supplier and designed to meet AS 4024 or an equivalent standard, then an assessment is not required.

# FP10 Pre-Qualified, Competent and Approved Contractors

Where they are used, contractors safely service and maintain fixed plant to ensure its ongoing safety and suitability.

## MINIMUM REQUIREMENTS

- Contractor organisations that perform fixed plant inspections, repairs and maintenance are pre-qualified based on their capability and experience in managing the safety risk.
- Contractor workers that perform fixed plant inspections, repairs and maintenance are inducted and approved subject to the correct work license.

## ADDITIONAL REQUIREMENTS

- Contractors should apply an equivalent pre-qualification process to their sub-contractors.

## NOTES AND REFERENCES

- Pre-qualification is not required where the OEM, or their nominated agent, is used to service and maintain fixed plant.

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