SKID STEER DAILY CHECKS

Pre-Use Inspections.

- Plant should be checked according to the manufacture's specifications.
- The checks should be recorded in the defect book or daily check sheet.
- Any defects should be reported
- Suitable PPE should be worn when carrying out the prestart checks to
- prevent skin disease and contaminating the controls
- Engine oil, Hydraulic oil, Transmission oil, Coolant, Brake fluid,
- Tyres and the condition of the skid steer loader should be checked

Checks will vary depending on make model always read the operators manual

- **Mirrors-** it is essential to maintain good all-round observation when operating the Skid Steer. To assist some machines are fitted with a variety of mirrors, they must be adjusted properly, secure, clean, and free from damage

- **Cameras-** most large construction plant are fitted with reversing cameras to increase the field of vision; they provide vision in areas not covered by the mirrors and can also be fitted with volume allowing the operator to hear warning instructions. The disadvantage of cameras they can be hit when reversing, get dirty, and are affected by the glare of the sun

Quick Coupler Systems- (Quick Hitch) – are designed to allow the fast and efficient changing of attachments. Although they improve performance and efficiency, they have been involved in many serious and fatal accidents in recent years. The systems themselves are safe to use but if not used properly or not maintained properly they will fail, and this unfortunately tend to have severe consequences. Couplers can be fitted to Excavators, Shovels, Forklifts, Skid steers and other plant. The Quick couplers fall into 3 main categories

- **Manual-** no hydraulic system fitted, and it is activated by hand. Locking devices to prevent accidental release is almost always a safety pin and clip. Safety Pin must be fitted, and it is the operator's responsibility to ensure it is. (This type is the most common on skid steers)

- **Semi-Automatic** – the functions of the coupler are activated from the cab i.e. hydraulic ram opens and releases the attachment and is then closed to secure a new attachment. Locking device is manually activated at the coupler and is mostly a safety pin and clip but can vary according to manufactures. The Operator is responsible for ensuring the attachment is secure on the machine and the locking device Activated. This type of Hitch is no longer supplied and fitted to new machines in this country, but is still widely used on older machines

- **Automatic** – All functions are carried out from the cab including the secondary locking systems it is the operator's responsibility to ensure it is used correctly as per the manufactures instructions
- **Pre use inspection of the Hitch-**
  1. Check for any sign of damage to the coupler
  2. Any cracks or wear which might reduce the strength
  3. Check for signs of oil leaks
  4. Remove any build-up of material which might be hiding defects or damage
  5. Ensure locking device is activated or in the correct position
  6. Correct size and weight of attachments are used
  7. Check for excessive play which will allow too much movement of the attachment and may make it difficult to use efficiently or safely
  8. The Coupler is tested and certified

Skid-steer loader safety alert

The purpose of this information bulletin is to alert employers and employees about a fatality where an operator was crushed by the lift arm of a skid-steer loader. The bulletin describes the dangers that can result from defective interlocks which, when combined with unsafe operating practices, can potentially result in serious injury or death to the operator and/or others in the vicinity of the machines. The bulletin stresses the importance of reviewing and following manufacturer's instructions and having properly trained operators as well as the need to test, inspect and maintain interlocks.

The arms and bucket tilt mechanism on skid-steer loaders present potential crushing and shearing hazards when they are moving. Cab fronts are not necessarily enclosed and often entry/exit is via the cab front. Hence, operators can potentially be exposed to these hazards if they lean out of the cab front or, as they exit the cab on front exit/entry machines. People who approach the machine whilst it is operating or perform maintenance are also at risk from the crushing hazards.

One of the safeguards that skid-steer manufacturers install, to help reduce the risk of crushing, is an interlock to prevent unexpected or inadvertent operation of the arms and tilt mechanism. This is normally achieved by the operator raising some form of restraint bar or arm rest which is linked to the machines hydraulic circuit.

The skid-steer loader in question was fitted with foot pedal controls directly linked to a hydraulic valve. The spool inside this valve should have been locked by an electrical solenoid activated by raising the restraint bar. During an investigation by HSE it was found that raising the restraining bar failed to engage the spool lock leaving the pedals active, ie the operator could still operate the lifting arm and tilt mechanism using the pedals even though the restraint bar had been raised. This only occurred if the foot pedals had not quite returned to their neutral position before the restraint bar was raised. When not in neutral, it was found that the solenoid could not engage with the valve's spool. Two potential causes were identified that would prevent the pedals returning to neutral, as follows:

- Even on an adequately maintained machine, the operator may inadvertently rest their foot on the pedal (foreseeable given the relatively restricted space) thereby holding it off neutral.
- Poor maintenance or a build-up of material can increase resistance on moving components of the pedal linkages. This resistance overcomes the spring force needed to return the pedals to neutral.

When using any skid-steer loader it is essential that operators are properly trained and that they operate the loader safely in accordance with the manufacturer's operating manual. However, if a skid-steer loader is identified as having this particular type of interlock (ie direct link to a hydraulic valve), operators also need to be made aware of the potential for it to fail to engage and reminded that they must:

1. Always lower the bucket or attachment so that it is flat on the ground before they (or anyone else) approach the danger zone created by the arms and bucket tilt mechanism.
2. Always ensure that not only is the safety bar raised but that the pedal interlock has actually engaged before anybody approaches the danger zone, i.e., ensure that the pedals are not still active.
3. Daily check the function of the interlock. This will require the operator to:
    - raise the lift arms then partially lower them.
    - release the pedals completely.
    - raise the safety restraint bar.
    - attempt to lower the lift arms keeping the restraint bar raised.

If these pedals are found to be active with the restraint bar raised, it is likely that the pedals are not returning to neutral. This is a potentially dangerous fault, and the machine must be taken out of service until the fault is rectified.

Those with responsibility for maintenance of skid-steer loaders should identify whether the machine if fitted with this type of direct linked interlock. The maintenance regime must include checking/maintaining the interlock mechanisms. In particular.

- Ensure that the areas around the pedals, pedal linkage, valve block and spool valve are clean
- Ensure that the pedal bearings and pedal shaft are lubricated and check for smooth operation.

Maintenance personnel also need to be made aware of the potential for this interlock to fail to danger and should be reminded that they must exercise greater care when undertaking maintenance which should be done in accordance with the manufacturer's recommendations.