Customer Service Bulletin
Commercial Business Group

Seat Maintenance and Safety

Date: June 11, 2003

All Equipment Seats (especially any of the following Model Numbers Using Grammer or Milsco Brand Seats):

Model Numbers: 03425, 03427, 03430, 03502, 03530, 03531, 03601, 03603, 03800, 03801, 03802, 03804, 03805, 04350, 04351, 04352, 04353, 04354, 04375, 04380, 04381, 04450, 07210, 30243, 30794, 30223, 30224, 30230, 30243, 30301, 30302, 30450, 30455, 03701, 03702, 03702TC, 03703, 03704, 03705, 30580, 30620, 30200, 30789, 30788, 30795, 41105, 41564

Serial Numbers: 10001 through 200999999

Model Numbers: 03200, 03201, 30821, 03706, 03707, 30410

Serial Numbers: 90001 through 230099999

Subject: Routine Inspection and Maintenance of Equipment Seats

As an ongoing service to our customers, we the Toro Company, do our best to keep the customer informed of safety issues as they arise.
When proper seat and seat safety operation is overlooked during routine maintenance checks, safety of the operator and/or bystander can be compromised. In the following pages of this bulletin areas that need to be checked during routine maintenance are described to insure proper seat slide and seat switch operation.

Warning: Failure to comply with this bulletin may result in personal injury due to an inoperable seat switch, or a broken suspension that could allow the seat to disconnect from the traction unit.

Contact your local authorized Toro Commercial Products Distributor for additional assistance if needed.

Commonly, service maintenance emphasis is placed on cutting units, engines, and hydraulic systems. It can be easy to overlook routine care items such as lug nuts, loose fasteners, seats, and other areas that may lead to safety issues. This bulletin addresses the importance of regular seat and seat switch maintenance.

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Improper seat and switch operation could cause unsafe conditions which may prevent your machine from operating correctly, or could prevent your equipment operator from being protected by that system/function. The safety interlock system is used on most machines to prevent personal injury due to unintentional operation when an operator leaves the seat. When a seat is vacant, the engine should stop if the traction pedal or implement control is engaged. The system also prevents the engine from starting unless the traction pedal is in neutral and implement controls are disengaged. On some units, the safety interlock system also prevents the machine from moving unless the parking brake is off, and the operator is seated. The seat and safety switch should be checked for proper operation on a daily basis. Refer to the following pages for illustrations and preventive maintenance services and suggestions.

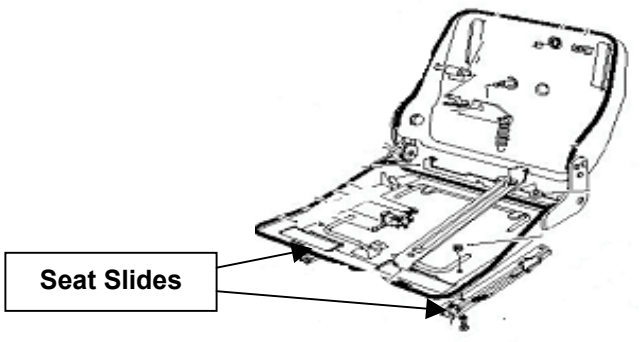
The following is a list of conditions that could cause the seat or its safety switch to malfunction:

- Seat adjustment lever inoperable.
- Seat slides dirty or not lubricated.
- Debris under and around seat.
- Seat components (e.g. frame, arm rest, etc.) damaged, loose, or broken.
- Wiring or switch damage, disconnected wires, misadjusted switch, or "jumped" circuitry.
- Broken or worn rivets/fasteners.

If safety interlock switches are disconnected or damaged the machine could operate unexpectedly causing personal injury. If the interlock system is not working properly, Do Not Operate the unit until it is properly repaired. Check your operator's manual for proper operating procedures for your specific equipment. Contact your Toro distributor for assistance as necessary to assure correct operation of the seat and its safety interlock system.

Cleaning Seat Slide

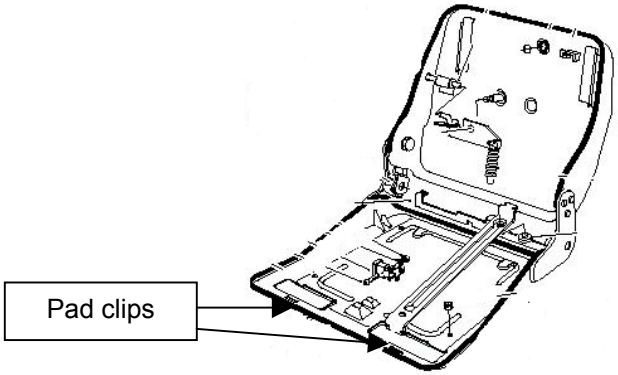
When cleaning machinery, the seat slide areas often get overlooked. When dirt and debris get in the slide areas, they can cause binding or poor operation of the seat slide. The arrows below point to slide adjustment areas, these areas should be inspected daily, cleaned, and lubricated on a regular basis to insure proper operation of the seat adjustment.



Debris Removal

Seats are delivered with a plastic cover for shipping protection. Sometimes a seat may not have this plastic completely removed before use, leaving excess plastic in and around the seat and switch (as shown in the picture below). This excess plastic can dislodge and get caught in the switch and cause it to become inoperative. Debris such as rags, trash, or gloves should not be left around the seat for similar reasons.

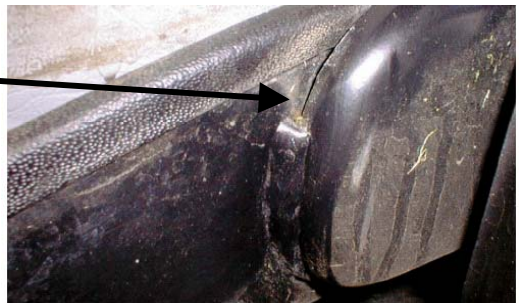
It may be easer to remove the shipping plastic from under the seat by lifting out the bottom seat cushion. Remove the seat pad by using the seat pad clips located at the front of the seat, (clip areas are shown on the seat assembly diagram). If for some reason the seat pad cannot be removed, use a tool such as long pliers to remove all loose plastic left on the seat.



Replacing broken seat components.

If the seat base becomes damaged in any way, the damaged components need to be replaced, not repaired. This insures proper alignment of seat and backrest assembly. This is extremely important for proper alignment and operation of the seat switch.

A weld type repair can prevent correct seat alignment and switch movement



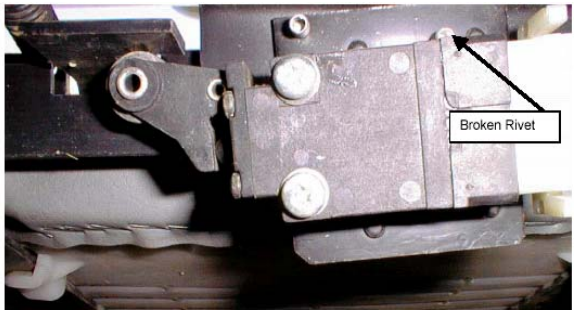
Even though the seat switch in the picture below looks functional, because the seat had a broken seat frame that was re-welded, the switch swing arm has minimal movement. Due to that improper movement of the mechanism, the seat switch could be rendered inoperable.

Swing Arm

Broken or worn rivets

The seat switch mounting bracket shown below is attached to the seat with rivets. Worn or broken rivets can cause seat switches to malfunction or become inoperable. To show the importance of performing a daily check on these areas we have listed situations were the rivet is worn or broken and the problems that could result (refer to the photographs below).

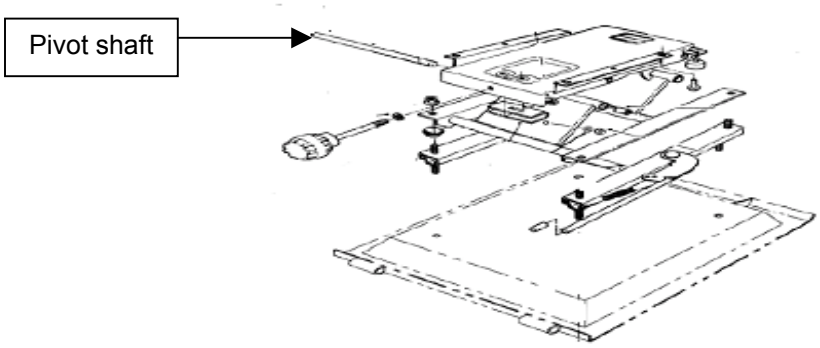
- Even though the bar is in contact with the roller, the seat switch engagement may be intermittent if rivets are worn or broken. Irregular operation can result if the assembly catches on the seat switch mount's broken rivet.
- The rear rivet farthest to the right is broken, allowing the switch assembly to pivot on the left hand rivet. When a moving mount catches on the broken rivet, it can properly sense operator position, but at any time the switch can break free from the broken rivet causing the switch to malfunction.
- With the broken rivet, the roller follows the bar as it moves when operator is seated. Even though the roller is still in contact with the bar, it appears that the switch is being depressed, but the switch is not functional.



Shown below is the front side of the broken rivet. To inspect this area, push the seat cushion down where the backrest and seating area meet.

Damaged Suspension Frame

In some cases, seat bases like the one shown below, have experienced weld failure where the pivot shaft is welded to the side rails. There are four different places where these two components connect. These components must not be re-welded. These parts are chrome plated, the plating causes metal fatigue when welded and therefore will not hold. Should these pins break away from the side rails, the seat assembly could separate from the base (serious injury could result). Check these areas while doing your daily safety checks, and replace if cracked or broken welds are present.



If weld failure occurs on the pivot shaft ends, the following parts need to be replaced to convert the welded pivot shaft style seat base, to the non-welded pivot shaft version.

- 66-8560 Nut - Push
- 76-1910 Shaft - Pivot
- 66-8600 Frame - Upper

Important:

If safety interlock switches are disconnected or damaged, the machine could operate unexpectedly causing personal injury. If the interlock system is not working properly, Do Not Operate the unit until it is properly repaired. Check your operators manual for proper operating procedures for your specific equipment. Contact your Toro distributor for assistance as necessary to assure correct operation.