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**Datasheet for the decision  
of 10 November 2021**

**Case Number:** T 0877/19 - 3.2.01

**Application Number:** 11852006.3

**Publication Number:** 2655244

**IPC:** B66F11/04, B66F17/00

**Language of the proceedings:** EN

**Title of invention:**

WORK PLATFORM WITH PROTECTION AGAINST SUSTAINED INVOLUNTARY  
OPERATION

**Patent Proprietor:**

JLG Industries Inc.

**Opponent:**

Niftylift Limited

**Headword:**

**Relevant legal provisions:**

EPC Art. 54, 56, 123(2)

**Keyword:**

Novelty - (yes)

Inventive step - (yes)

Amendments - allowable (yes)

**Decisions cited:**

**Catchword:**



**Beschwerdekammern**

**Boards of Appeal**

**Chambres de recours**

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Case Number: T 0877/19 - 3.2.01

**D E C I S I O N**  
**of Technical Board of Appeal 3.2.01**  
**of 10 November 2021**

**Appellant:** JLG Industries Inc.  
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**Decision under appeal:** **Interlocutory decision of the Opposition  
Division of the European Patent Office posted on  
21 January 2019 concerning maintenance of the  
European Patent No. 2655244 in amended form.**

**Composition of the Board:**

**Chairman** H. Geuss  
**Members:** M. Geisenhofer  
A. Jimenez

## **Summary of Facts and Submissions**

I. Appeals were filed by the patent proprietor and the opponent against the interlocutory decision of the opposition division concerning maintenance of European patent No. 2 655 244 in amended form on the basis of auxiliary request 5 (then on file).

II. The opposition division decided that:

- the subject-matter of the claims of this request was novel and inventive (Articles 54 and 56 EPC)
- the subject-matter of the claims of this request did not extend beyond the content of the application as filed (Article 123(2) EPC)

The opposition division further decided with regard to the higher ranked requests filed in opposition proceedings that the subject-matter of the main request (patent as granted) and auxiliary requests 1 to 4 (then on file) extended beyond the content of the application as filed (Article 123(2) EPC).

III. The following documents are mentioned in the present decision:

|     |   |
|-----|---|
| A03 | WO 2011/015814                            |
| A04 | EP 2 462 049 A                            |
| A05 | JPS 63-142400 U with machine translation  |
| A08 | JP 2002-114500 A with machine translation |
| A09 | JPS 62-113200 U with machine translation  |
| A12 | JPH 10-7398 with machine translation      |
| A16 | JP 62-153098 A with machine translation   |

IV. Oral proceedings were held before the Board.

(a) The appellant (patent proprietor) requested that the patent be maintained on the basis of the main request (filed as auxiliary request 5 with the statement of grounds of appeal and corresponding to the version found allowable by the opposition division).

(b) The appellant (opponent) requested that the decision under appeal be set aside and that the European patent be revoked.

V. Independent claim 1 according to the main request reads as follows:

*"A personnel lift including a work platform, the work platform having a floor structure (20), a safety rail (22) coupled with the floor structure and defining a personnel work area, a control panel area (24) and a protection envelope surrounding the control panel area, the protection envelope enhancing protection for an operator from an obstruction or structure that may constitute a crushing hazard;*  
*the work platform having a switch bar (28) secured to the control panel area, wherein the protection envelope comprises a platform switch (30) attached to the switch bar that is configured to trip upon an application of a predetermined force to the platform switch (30);*  
*the personnel lift comprising a vehicle chassis (2); a lifting assembly (8) secured to the vehicle chassis, wherein the work platform (10) is attached to the lifting assembly;*  
*a control panel (14) disposed in the control panel area (24), the control panel including an operator input implement; driving components co-operable with the lifting assembly for lifting and lowering the work platform; and a control system (12) communicating with the driving components, the control panel, and the platform switch, the control system controlling operation of the driving*

*components based on signals from the operator input implement and the platform switch;*

**characterized in that** *the control system (12) is programmed to:*

*initiate a reversal function, that terminates based on the platform switch signal, a footswitch signal, from a footswitch that when disengaged terminates the reversal function at any time, and time parameters that are set for different functions respectively, and reverse a last operation when the platform switch (30) is tripped; and stop the reversal function if the platform switch changes from trip status to non-trip status before a maximum reversal time is elapsed, the reversal function otherwise being active until the maximum reversal time is elapsed."*

VI. The opponent's arguments can be summarised as follows.

(a) The subject-matter of claim 1 of the main request **extends beyond the content of the application as originally filed** since the reversal function defined in the characterising portion was only disclosed in the originally filed description in combination with the further feature "the operation required RPM target is maintained during the reversal function".

(b) The subject-matter of claim 1 of the main request is **not novel over A03** ("N-1").

(i) A03 discloses a switch bar with a pressure sensor, the pressure sensor being a platform switch as described in the patent in suit.

- (ii) A03 further discloses a reversal function which stops either as soon as the signal of the pressure sensor is cancelled or after a predetermined maximum time period. In addition, any function including the reversal function can be stopped by disengaging the footswitch, which acts as a dead-man's switch.
  
- (c) The subject-matter of claim 1 of the main request is **not inventive** when starting from **document A09 as the closest prior art** ("IS-1"). A09 suggested using a control mechanism for the reversal function as defined in claim 1 also in the personnel lift of A08.

Although this line of argument was first raised in appeal proceedings, it should be admitted since it is highly relevant.

- (d) The subject-matter of claim 1 of the main request is **not inventive** when starting from **document A08 as the closest prior art** ("IS-2", "IS-3" and "IS-4") since use of a tripping switch bar to detect whether the operator is trapped between the control panel and an obstacle is obvious (general knowledge but also disclosed in A05, A09 and A16). Furthermore, if the "dedicated switch" disclosed in [0028] of A08 was not considered the same as a footswitch, it would at least be obvious to use a footswitch as a "dedicated switch" (general knowledge but also disclosed in A03, A12 and A16).
  
- (e) The subject-matter of claim 1 of the main request is **not inventive** when starting from **document A05 as**

**the closest prior art** ("IS-5") since A08 suggests a control device for carrying out a reversal function which is stopped based on either of the three conditions "switch bar changes from trip status to non-trip status", "footswitch disengaged" and "maximum time elapsed", which the skilled person would apply to A05. If the "dedicated switch" disclosed in [0028] of A08 was not considered a footswitch, it would be at least obvious to use a footswitch as a dedicated switch.

- (f) The subject-matter of claim 1 of the main request is **not inventive** when starting from **document A03 as the closest prior art** ("IS-6" and "IS-7"). If the tripping switch bar was not considered to be disclosed in A03, A09 would render using a separate switch bar that can trip obvious. Furthermore, the skilled person knows due to their expert knowledge that a reversal function cannot be unlimited and hence must stop after a certain time period. Furthermore, if releasing the footswitch can stop operation of the personnel lift during normal operation, it is obvious to also stop reversal due to a release of the footswitch.

VII. The proprietor's arguments can be summarised as follows.

- (a) The engine speed used for the reversal function is not intrinsically linked to the possibilities of the operator to stop the reversal function. Thus, it is not necessary to include the feature "the operation requires RPM target is maintained" in claim 1. This means the **amendment is allowable**.

The objection under Article 123(2) EPC was only raised in appeal proceedings and therefore should not be admitted into the procedure since it should have been filed in opposition proceedings.

- (b) The subject-matter of claim 1 of the main request is **novel over document A03** since A03 discloses neither a tripping switch bar in addition to the control panel nor that the reversal function can be stopped by each of the three possibilities defined in the characterising portion of claim 1.

The line of argument of a lack of inventive step starting from document A09 should not be admitted since the opponent should have raised it in opposition proceedings.

- (c) Even if A09 is taken into account, the skilled person would, when **starting from document A09**, not combine A09 (which teaches that when the operator is trapped, the personnel lift must stop) with A08 (which teaches an automatic reversal function). Furthermore, A08 does not disclose termination of the reversal function by a control system that takes into consideration the three conditions "switch bar changes from trip status to non-trip status", "footswitch disengaged" and "maximum time elapsed".
- (d) When **starting from document A08**, the skilled person has no reason to replace the "pinning detection means 21" using a pressure sensor with a switch bar and a platform switch detecting whether the switch bar is in a trip or a non-trip status. In addition, the skilled person has no teaching at hand that the control system should consider the three conditions

"switch bar changes from trip status to non-trip status", "footswitch disengaged" and "maximum time elapsed".

- (e) When **starting from document A05**, the skilled person cannot derive from A08 the use of the three conditions "switch bar changes from trip status to non-trip status", "footswitch disengaged" and "maximum time elapsed" since A08 discloses neither a footswitch nor a maximum time for reversal. The "dedicated switch" of A08 is not a footswitch; nor can it be replaced with a footswitch.
- (f) The subject-matter of claim 1 of the main request is not rendered obvious by A09 and the general knowledge when **starting from document A03**. The skilled person would not consider stopping the reversal function when the operator disengages the footswitch. Furthermore, there are plenty of other possibilities to limit the reversal function, such as stopping the reversal after a set distance.

## **Reasons for the Decision**

### **Main Request**

1. The main request in appeal proceedings corresponds to the fifth auxiliary request filed in opposition proceedings and upheld by the opposition division.

### **Amendments (Article 123(2) EPC)**

2. Claim 1 according to the main request complies with the requirements of Article 123(2) EPC.

- 2.1 The features of the characterising portion undisputedly find a basis on page 6, lines 21 to 26 of the originally filed description.
- 2.2 It is, however, disputed by the opponent whether the feature "the operation required RPM target is maintained during the reversal function" disclosed on page 5, lines 32 and 33 is intrinsically tied to the features disclosed on page 6, lines 21 to 26 forming the characterising portion.
  - 2.2.1 The features disclosed on page 6, lines 21 to 26 define three conditions considered by the control system to stop the reversal function. This reversal function must be stopped at some point whereas the reversal movement as such can be carried out at any speed of the driving components sufficient for actuating the lifting assembly. The speed need not be constant nor above a minimum during the reversal function.
  - 2.2.2 Maintaining a particular operation required RPM target during the reversal function is hence not necessary for the control system's decision on when to stop the reversal function. Thus, the feature "the operation required RPM target is maintained during the reversal function" is not intrinsically linked to the control of the end of the reversal function defined in the characterising portion. Not including this feature is hence not an unallowable amendment within the meaning of Article 123(2) EPC.
- 2.3 Thus, it can be left open whether this objection should have been raised in opposition proceedings and therefore should not be admitted into the appeal proceedings (Article 12(4) RPBA 2007).

**Novelty (Article 54 EPC)**

3. The subject-matter of claim 1 is novel within the meaning of Article 54 EPC.

3.1 It is undisputed that A03 discloses a personnel lift having the following features.

(a) The personnel lift comprises a work platform, the work platform having a control panel with an operator input implement disposed in the control panel area.

(b) The personnel lift further includes a control system with either a push button (106) mounted on the control panel or a footswitch (110) mounted on the work platform (see page 7, lines 23 to 29) that can generate an activation signal transmitted to the control system and allows the operator to displace the work platform.

(c) If during operation the operator is trapped between an obstacle and the control panel (see Figures 3 and 4), a load sensor (112) provides a signal to the control system which causes an immediate stop and then a reversal function (see page 8, lines 1 to 13).

3.2 However, the parties dispute how the reversal function is stopped, in particular whether it is stopped when the footswitch is released or when a maximum time has elapsed.

- 3.2.1 The opponent alleged that according to page 8, lines 14 to 21, the operator can stop the reversal function by releasing the footswitch.

The opponent further argued that it can be deduced from page 8, lines 8 to 10 that a partial reversal function implies that the reversal function ends before it is complete. This requires a further criterion to the load signal which can only be time, i. e. the reversal function ends when a maximum time has elapsed even if the reversal only partially took place.

The control system of A03 would hence also stop the reversal function when the footswitch (110) is released or when a maximum time has elapsed.

- 3.2.2 In the Board's view, A03 discloses with regard to the reversal function that the end of the reversal function is attained after a measured amount of hydraulic oil is released by energising a relief valve for a short (and hence previously fixed) period (see last paragraph of page 11). Furthermore, page 9, lines 3 to 6 explains that the personnel lift returns to normal operation when the load has been removed and the load signal provided by the load sensor is cancelled.

The Board notes that the passage on page 8 cited by the opponent refers to the "activation control (106)" as an override control which is, according to page 7, lines 23 to 29, a push button on the control panel and not a footswitch. Furthermore, the operator needs to hold down the activation control to override the reversal function (see page 8, line 14) - the opposite of releasing the switch as required by claim 1 the main request.

Furthermore, A03 refers (as set out above) on page 11 to a "measured amount of hydraulic oil" such that A03 itself provides alternative parameters to be used to determine the end of the reversal function. It is hence not only time that can be considered by the control system. This means that A03 does not implicitly disclose that the reversal function ends when a maximum time has elapsed.

3.2.3 The subject-matter of claim 1 therefore differs from the personnel lift known from A03 in that the control system is programmed differently with regard to when to terminate the reversal function. Thus, claim 1 complies with the requirements of Article 54 EPC.

4. The proprietor further contested that A03 lacks any disclosure of a switch bar that trips in addition to the control panel disposed in the control panel area, whereas in A03 it is the control panel itself that trips.

Since this aspect is not relevant for the decision, it can be left open whether this argument regarding an additional potential difference between the claimed personnel lift and the personnel lift of A03 should not be admitted in accordance with Article 12(4) RPBA 2007, as requested by the opponent.

#### **Inventive step (Article 56 EPC)**

5. The subject-matter of claim 1 of the main request is inventive within the meaning of Article 56 EPC.

6. Starting from **document A03 as the closest prior art**, the claimed personnel lift is not rendered obvious.

- 6.1 As set out above with regard to novelty, the subject-matter of claim 1 of the main request differs from the personnel lift known from A03 at least in that the control system is programmed to initiate a reversal function that terminates based on the platform switch signal, a footswitch signal and time parameters that are set for different functions respectively. The reversal function is terminated:
- when the footswitch is disengaged at any time
  - when the platform switch changes from the trip to the non-trip status before a maximum reversal time has elapsed
  - when the maximum reversal time has elapsed
- 6.2 The opponent argued that this control system is an obvious alternative known from the prior art.
- 6.3 The Board, however, notes that there is no teaching in the prior art on file that would teach the skilled person to program the control system to terminate the reversal function not only when the platform switch provides a signal indicating that the operator is no longer trapped but also after a release of a footswitch and the expiry of a maximum reversal time.
- 6.3.1 Although the opponent alleged that using the release of the footswitch to stop the reversal function is obvious for the skilled person due to their expert knowledge in the field of lifting equipment, the Board concludes that it is not obvious to replace the active pressing of a push-button on a control panel according to A03 with the release action of an already pressed footswitch. The skilled person would - if anything - replace a hand-operated switch on the control panel with a footswitch but not alter how the switch is actuated (releasing instead of pressing).

6.3.2 The Board further concludes that the concept of stopping an automatically initiated operation to release a trapped operator as defined in claim 1 cannot be compared to the function of a generally known dead-man's switch either, contrary to the opponent's argument.

A dead-man's switch stops an action started actively by the operator who suddenly is no longer able to control this action. The dead-man's switch has to be pressed prior to starting the action and immediately stops the normal operation in case of an emergency when the operator releases the dead-man's switch.

However, stopping the reversal function according to claim 1 concerns an automatically initiated action in response to an emergency and not the normal operation of the working platform. After a short reversal function, the operator (having temporarily lost control due to being trapped) wants to take over again and therefore terminates the automatically initiated and driven action by releasing the footswitch. This situation does not correspond to when the device is stopped after the release of the dead-man's switch due to the operator becoming unable to control the normal operation of the device.

6.3.3 Document A09 - contrary to the opponent's allegation - does not suggest such a control system either. A09 discloses neither an automatically initiated reversal function nor a footswitch for stopping such a reversal function.

6.3.4 It is hence not obvious for the skilled person to expand the function of the footswitch of A03 to the function claimed in claim 1 of the main request.

7. The subject-matter of claim 1 is also inventive when starting from **document A05 as the closest prior art.**

7.1 Although the proprietor argues that A05 is not a suitable starting point since it does not concern a personnel lift but only a switch bar, the Board notes that Figure 11 discloses a personnel lift and that translation A05T3 (on page 2, third last paragraph) explains that this personnel lift uses the switch bar of Figures 3 and 7(c). Starting from A05 as the closest prior art is hence not excluded per se.

7.2 Document A05 discloses a personnel lift with a work platform having a control panel (55) with a switch bar (42) that actuates a platform switch upon the tripping of the switch bar due to the operator being trapped between an obstacle and the control panel.

The control system of the personnel lift is programmed to stop as soon as the switch bar detects that the operator is trapped (see e.g. the last line of page 2 of the machine translation A05T3 of A05).

7.3 The subject-matter of claim 1 thus differs from the personnel lift known from A05 in that the control system is programmed to initiate a reversal function that terminates based on the platform switch signal, a footswitch signal and time parameters set for different functions respectively. The reversal function is terminated:

- when the footswitch is disengaged at any time

- when the platform switch changes from the trip to the non-trip status before a maximum reversal time has elapsed
- when the maximum reversal time has elapsed

7.4 The opponent argued that the skilled person would seek to improve the control system of the personnel lift for when the operator is trapped between the personnel lift and an obstacle. In the opponent's view, A08 would render it obvious to modify the personnel lift known from A05 such that the control system be programmed to not only stop but to initiate a reversal function, which is terminated based on the three conditions defined above in the last paragraph.

In support for this allegation, the opponent referred to paragraphs [0025] to [0028] and [0039].

7.5 The Board, however, cannot acknowledge that A08 proposes a control system for stopping the reversal function using the three conditions "switch bar changes from trip status to non-trip status", "footswitch disengaged" and "maximum time elapsed" as defined in the characterising portion.

7.5.1 In the Board's understanding, A08 discloses that a reversal function is initiated (see [0011] and [0026] of the translation of A08) to free the operator. This reversal stops according to [0014] after "a predetermined amount of reverse actuation". As set out in paragraph [0039], the predetermined amount of reverse actuation may be, *inter alia*, a predetermined length of time or a reverse actuation to a position where the "pinning detection means no longer makes a detection and remains actuated".

- 7.5.2 A08 hence can only render it obvious to initiate a reversal function that is terminated either:
- when the platform switch changes from the trip to the non-trip status
  - when a maximum reversal time has elapsed
- 7.5.3 A08 does not, however, disclose that both conditions can be used at the same time by the control system such that the reversal function is terminated:
- when the platform switch changes from the trip to the non-trip status before a maximum reversal time has elapsed
  - when the maximum reversal time has elapsed
- 7.5.4 For this reason alone, a combination of A05 with A08 cannot render the subject-matter of claim 1 of the main request obvious.
- 7.6 In addition, the third condition mentioned in claim 1 (footswitch disengaged) is not rendered obvious by A08 either.
- 7.6.1 The opponent's argument that paragraph [0028] of A08 disclosed that the reversal can also be stopped by actuating the dedicated switch which acts as a dead-man's switch and which can be a footswitch is not shared by the Board.
- 7.6.2 As set out in paragraph [0028] of A08, the dedicated switch detects that the operation levers have been brought to a neutral position after the start of reverse actuation. The dedicated switch is hence not a user operated switch but a sensor controlling whether the operation levers are still being actuated by the operator. Furthermore, the dedicated switch must be located near the operation levers, i. e. on the control

panel, since otherwise control of lever position would not be possible.

7.6.3 The dedicated switch is thus neither a switch operated by the operator to interrupt the reversal function nor a footswitch.

7.6.4 Hence, a combination of A05 with A08 cannot render the third condition (footswitch disengaged) obvious either.

7.7 Thus, it can be left open whether the skilled person would combine A08 (teaching to have a reverse function after the system has been notified that an operator has been trapped by the tripping of the switch bar) with A03 (teaching to stop the machine in the very same situation) as argued by the proprietor.

8. The subject-matter of claim 1 is also inventive when starting from **document A08 as the closest prior art.**

8.1 As set out above (see section 7.5.3), document A08 discloses a reversal action that terminates either:

- when the platform switch changes from the trip to the non-trip status
- when a maximum reversal time has elapsed

8.2 The subject-matter of claim 1 differs from the personnel lift known from A08 in that the reversal is terminated by the control system based on all three parameters "switch bar changes from trip status to non-trip status", "footswitch disengaged" and "maximum time elapsed" at the same time.

8.3 Since none of the prior-art documents discloses a control system that initiates a reversal function that is terminated using all three criteria mentioned in

claim 1 in parallel, there is no teaching available that could render such a programmed control system obvious.

8.4 It thus can be left open whether the skilled person would use the tilting switch bar as a pinning means in A08 as argued by the opponent since in any case the resulting personnel lift would lack the control system to stop the reversal function.

9. The subject-matter of claim 1 is also inventive when starting from **document A09 as the closest prior art.**

9.1 It is undisputed that document A09 discloses in Figure 2 a personnel lift with a work platform having a control panel with a switch bar ("guard" 7). The control system of the personnel lift is programmed to stop as soon as the switch bar detects that the operator is trapped (see page 4, third paragraph of the translation).

9.2 The subject-matter of claim 1 thus differs from the personnel lift known from A09 at least in that the control system is programmed to initiate a reversal function that terminates based on the platform switch signal, a footswitch signal and time parameters set for different functions respectively. The reversal function is terminated:

- when the footswitch is disengaged at any time
- when the platform switch changes from the trip to the non-trip status before a maximum reversal time has elapsed
- when the maximum reversal time has elapsed

9.3 Since none of the prior-art documents discloses a control system that initiates a reversal function that

is terminated using all three criteria mentioned in claim 1 in parallel, there is no teaching available that could render such a programmed control system obvious.

9.4 The opponent argued that A08 rendered such a control system obvious. However, as explained above, A08 discloses neither a control system that considers all three conditions identified above at the same time nor that a footswitch provides input to the control system for controlling the reversal function.

9.5 It hence can be left open whether this line of argument can be admitted into the proceedings under Article 12(4) RPBA 2007.

10. No further lines of argument were raised by the opponent. Thus, there is no reason to deviate from the opposition division's decision to maintain the patent on basis of the current main request which corresponds to the fifth auxiliary request in opposition proceedings.

## **Order**

### **For these reasons it is decided that:**

The appeals are dismissed.

The Registrar:

The Chairman:



A. Vottner

H. Geuss

Decision electronically authenticated