SHERIFFDOM OF LOTHIAN AND BORDERS AT EDINBURGH

[2020] FAI 20

EDI-B1422-19

DETERMINATION

BY

SHERIFF FIONA TAIT

UNDER THE INQUIRIES INTO FATAL ACCIDENTS AND SUDDEN DEATHS ETC (SCOTLAND) ACT 2016

into the death of

JOHN GORDON HAMILTON

Edinburgh, 28 April 2020

Determination

The Sheriff, having considered the information presented, determines that:

1. in terms of section 26(2)(a), Inquiries into Fatal Accidents and Sudden Deaths etc. (Scotland) Act 2016 that John Gordon Hamilton, born 25 June 1961 and residing at Innerwick, East Lothian, died between 1130 hours and 1320 hours on 24 March 2019 at the farm known as Nunraw North Lodge, Gifford, East Lothian. Life was formally pronounced extinct at 1345 hours on 24 March 2019;
2. in terms of section 26(2)(b) of the 2016 Act that the accident which resulted in the death of Mr. Hamilton occurred within the field known as

the 100 acre at Nunraw North Lodge, Gifford, East Lothian. The accident occurred between 1130 hours and 1320 hours on 24 March 2019;

3. in terms of section 26(2)(c) of the 2016 Act that the causes of death were: 1a) multiple injuries 1b) farm vehicle incident;

4. in terms of section 26(2)(d) of the 2016 Act that the accident which resulted in the death was caused by a sudden loss of control of the Merlo P40.7 telescopic handler, registration number SN13 EUH, which Mr. Hamilton was driving when the accident occurred;

5. in terms of section 26(2)(e) of the 2016 Act that the death might realistically have been avoided by the wearing of the seatbelt fitted within the Merlo P40.7 telescopic handler, registration number SN13 EUH, which Mr. Hamilton was driving when the accident occurred;

6. in terms of section 26(2)(f) of the 2016 Act that there were no defects in any system of working which contributed to the death and

7. in terms of section 26(2)(g) of the 2016 Act that other facts which are relevant to the circumstances of the death are that the service brakes of the Merlo P40.7 telescopic handler, registration number SN13 EUH, were in a poor state of repair and, as a result, not in good working order. When the vehicle began to roll backwards down the hill, depression of the brake pedal would have generated braking force insufficient to stop it.

Recommendations

The Sheriff, having considered the information presented at the inquiry, makes no recommendations in terms of section 26(1)(b) of the Act.

NOTE

Introduction

[1] This inquiry was held into the death of John Gordon Hamilton who was born on 25 June 1961 and resided at Innerwick, East Lothian.

[2] A preliminary hearing was held on 5 February 2020 and the inquiry was due to be held on 22 April 2020.

[3] Ms. Emma Bell, Procurator Fiscal Depute represented the Crown. There were no other participants although the Crown maintained contact with Mr. Hamilton's family in relation to progress of the inquiry.

[4] There was no other participant to enter into a joint minute of agreement. The Crown set out those matters which it considered were unlikely to be disputed in a Notice to Admit, the precise terms of which are set out below.

[5] It was proposed to lead evidence at the inquiry from Garry Miller, HM Inspector of Health and Safety. As the inquiry was assigned to a date during the lockdown arising from the coronavirus pandemic and as Mr. Miller was unavailable to give evidence for the foreseeable future, the Crown sought to proceed on the basis of Mr. Miller's report, Crown Production number 2, the undisputed information within the Notice to Admit and written submissions. It did so with the approval of Mr. Hamilton's family.

The Legal Framework

[6] The inquiry is a mandatory inquiry under section 2(3) of the Inquiries into Fatal Accidents and Sudden Deaths etc. (Scotland) Act 2016 (hereinafter referred to as "the

2016 Act") as Mr. Hamilton's death was the result of an accident which occurred while he was acting in the course of his employment.

Summary

[7] The majority of the evidence was set out in the Notice to Admit to the following effect:

i. Mr. Hamilton was born on 25 June 1961 and, at the date of his death, he was ordinarily resident at Innerwick, East Lothian.

ii. At the time of his death, Mr. Hamilton was one of the partners of the firm of John G Hamilton, a family farming partnership. He was actively involved in the running of the farm known as Nunraw North Lodge, Gifford, East Lothian.

iii. The farm known as Nunraw North Lodge extends to approximately 1100 acres and is used mainly for grazing livestock. There is also some arable land. The farm has been rented and operated by the firm of John G Hamilton for approximately six to seven years.

iv. On 24 March 2019, Mr. Hamilton was operating a Merlo P40.7 telescopic handler, registration number SN13 EUH (hereinafter referred to as "the vehicle"). The vehicle was fitted with a grain bucket and was being used to feed livestock.

v. The vehicle was purchased new by the firm of John G Hamilton from Ancroft Tractors Ltd. at Macmerry, East Lothian. It was serviced at

appropriate intervals and maintained and repaired where necessary by Ancroft Tractors Ltd. Crown Production number 4 comprises service and maintenance records relating to the services undertaken on the vehicle on 31 March 2017 and 31 March 2018. The vehicle had not yet been serviced for 2019.

vi. The vehicle was kept at Nunraw North Lodge and was ordinarily used by Mr. Hamilton. He had not completed any formal operator training in respect of the vehicle. However, he was considered to be an experienced operator.

vii. None of Mr. Hamilton's sons were aware of there being any issues or defects affecting the vehicle prior to the incident. The vehicle tended to be left in "four-wheel steering" mode at all times.

viii. On 24 March 2019, Mr. Hamilton was working at Nunraw North Lodge with his sons, Harry and Charles Hamilton. At approximately 1130 hours, he travelled to the field known as the 100 acre in the vehicle with the grain bucket laden with turnips for the sheep there.

ix. Mr. Hamilton was not wearing his seatbelt.

x. A line of turnips had been tipped roughly from the entrance to the field, diagonally across towards the area of trees at the top of the hill.

xi. It is apparent that the vehicle was then driven up the steepest part of the field towards the trees at the top of the hill.

xii. At the time of the incident, the weather and conditions underfoot were dry. The surface of the field was in good condition with the grass closely cropped.

xiii. The incident itself was unwitnessed.

xiv. At around 1320 hours, Harry Hamilton attended at the field to look for his father, Mr. Hamilton. He found the vehicle overturned, lying on its side at the foot of the hill and Mr. Hamilton lying on his back beneath the telescopic boom. Mr. Hamilton was trapped and unresponsive at that time. Harry Hamilton telephoned immediately for an ambulance.

xv. The telescopic lifting boom was in the raised position at that time.

xvi. The grain bucket was seen further up the hill, having detached from the lifting boom. There were also areas of fresh damage to the ground and rolling tyre marks present.

xvii. Helimed 76 based at Scone, Perthshire was dispatched to the locus at approximately 1325 hours. The crew arrived there at around 1340 hours and found Mr. Hamilton still trapped beneath the telescopic boom of the vehicle. He was not breathing and had no pulse. John Pritchard, paramedic, noted the presence of *post mortem* staining to his lower back and an obvious crush injury to his chest.

xviii. John Pritchard, paramedic, pronounced life extinct at 1345 hours.

xix. The body of Mr. Hamilton was taken to Edinburgh City Mortuary, Cowgate, Edinburgh and was examined by Dr. SallyAnne Collis,

consultant forensic pathologist on 2 April 2019. Crown Production number 1 is the *post mortem* examination report dated 22 July 2019 which details her findings.

xx. The medical cause of Mr. Hamilton's death was stated in Crown Production number 1 as 1a) multiple injuries 1b) farm vehicle incident.

xxi. An investigation into the circumstances of the accident which resulted in Mr. Hamilton's death was undertaken by Garry Miller, HM Inspector of Health and Safety. Crown Production number 2 is the HSE Investigation Report dated 17 September 2019 which was prepared by Garry Miller.

xxii. Crown Production number 3 is a series of 30 photographs of the locus, showing the vehicle and the grain bucket in their resultant positions and areas of damage on the ground. The photographs were taken by Garry Miller during his examination of the scene.

xxiii. As part of the HSE investigation David Gostick, HM Inspector of Health and Safety specialising in mechanical engineering, conducted a scene examination on 26 March 2019, a full mechanical examination of the vehicle on 1 April 2019 and rolling brake testing on the vehicle on 29 May 2019.

xxiv. A report of David Gostick's findings was prepared. It is Crown Production number 5, is entitled "Report on the fatal overturn of a telehandler" and is dated 1 August 2019.

[8] In Crown Production number 2 which is the HSE Investigation Report dated 17 September 2019, Garry Miller, HM Inspector of Health and Safety, addressed causal factors of the accident as follows:

> "In order to create a multiple overturn accident, [the vehicle] needed to be travelling with sufficient speed and momentum to maintain the rotation and overcome the rolling resistance created by the driver's cab and the raised telescopic boom…In order to achieve the necessary speed the vehicle would either need to be actively driven down the slope or the gearbox disengaged by switching it to the neutral position….It is very unlikely that Mr. Hamilton would drive at speed down the hill backwards. The logical conclusion is therefore that the vehicle had intentionally or by accident been switched into neutral. No faults were identified with any gear or neutral selection during either functional or brake testing and there would be no foreseeable reason for Mr. Hamilton to intentionally put the vehicle into neutral while on a steep slope. It is therefore most likely that Mr. Hamilton operated the high/low rocker switch with the intention of selecting low range in order to help drive the vehicle to the top of the 20 degree part of the slope. In doing so he would have brought the vehicle to a stop, he may or may not have applied the foot brake and then pressed the high/low selection rocker switch to the right. However, if for some reason he now held the rocker switch in the low range position for over 5 seconds, rather than releasing it again, the hydrostatic drive system would switch to neutral and the braking effect would be lost.
>
> Examination of [the vehicle]… found that when the brake pedal in the cab was depressed the pedal reached the floor with little resistance and could only provide approximately 12% of what should have been possible if the brakes had been correctly maintained. This would not have been sufficient to hold the vehicle on a 20 degree slope and it would therefore have started to run backwards down the slope. In the absence of braking provided by the hydrostatic drive system it would have picked up speed as it went.
>
> Daily or pre-use checks of [the vehicle] should have been carried out to meet the requirements of the Provision and Use of Work Equipment Regulations 1998. If done these checks would have identified if the brake fluid levels… were too low and also that the wire for the brake fluid level warning system had become detached….
>
> It would appear…that it was normal practice to leave the vehicle in four-wheel steer mode. This mode is intended for slow speed manoeuvring in tight spaces and during lifting operations. It is not intended for higher speed operations

> where the severity of the front and rear end swing that can be created would destabilise the vehicle and make it possible to overturn…
>
> Evidence from the position and condition of the seatbelt indicates that it was rarely if ever used. Had [Mr. Hamilton] been wearing the seatbelt at the time of the accident he would not have been ejected from the cab and may have avoided fatal injury.
>
> The telescopic lifting boom on the vehicle was in a raised position when found. Driving with the grain bucket in a raised position would have avoided obstructing the driver's view but if travelling at speed or on steep and undulating ground was an unsafe practice. The grain bucket… needed to be considered as a load on the vehicle and not just an attachment. When attached to the boom, the bottom of the bucket would have been at a height approximately level with the top of the driver's cab…and would have had a serious destabilising effect on the vehicle by increasing the centre of balance. …To follow good working practice, [Mr. Hamilton] should have lowered the bucket so that the weight was being carried at the lowest level that still gave adequate ground clearance and visibility. While this would not have prevented the runaway down the slope it may have reduced the centre of gravity sufficiently to have avoided the overturn."

[9] David Gostick, HM Inspector of Health and Safety specialising in mechanical engineering, in his report, Crown Production number 5, concluded:

> "The use of 4-wheel steer mode and condition of the service brakes would have significantly increased the likelihood of overturn when [the vehicle] travelled down the slope in reverse.
>
> Telehandlers are hazardous equipment. If their brakes are not adequately maintained then they may run away leading to collision or overturn with the potential for serious or fatal injury to both operators and persons in the vicinity….
>
> The use of [the vehicle] in 4-wheel steer mode would have increased steering sensitivity and made it much more difficult to control….increasing the risk of overturn."

Submissions on behalf of the Crown

[10] I was invited to make findings in terms of section 26(2)(a), (b), (c), (d), (e) and (f) as set out above.

[11] The proposed finding under section 26(2)(a) is based on the evidence set out in the Notice to Admit.

[12] The proposed finding under section 26(2)(b) is based on the evidence of Mr. Hamilton's sons, Charles Hamilton and Harry Hamilton, who spoke to him setting off for the 100 acre field at around 1130 hours on 24 March 2019. The accident itself was unwitnessed but had occurred prior to Harry Hamilton's arrival at the field at 1320 hours at which time he found his father trapped beneath the boom of the overturned vehicle.

[13] The proposed finding under section 26(2)(c) is based on the *post mortem* examination findings of Dr SallyAnne Collis, Consultant Forensic Pathologist, who undertook the *post mortem* examination on 2 April 2019. Her findings are contained within Crown Production number 1 which is the *post mortem* examination report dated 22 July 2019.

[14] The proposed finding under section 26(2)(d) is based on the HSE Investigation Report. The report seeks to set out the most likely actions taken by Mr. Hamilton and to explain how the accident unfolded. I am invited to accept the evidence of Mr. Gostick and of Mr. Miller and to find that a sudden loss of control was the result of the vehicle being placed in neutral gear accidentally when attempting to switch from high to low

ratio. That selection of neutral would have suddenly disengaged the engine braking system, allowing the vehicle to begin free-wheeling backwards down the slope.

[15] It is suggested that the situation was compounded by a combination of the following factors:

i. the vehicle was on the steepest part of the field (approximately 20 degree slope) allowing it to gain speed and momentum quickly as it rolled downhill;

ii. the service brakes provided insufficient braking effect to overcome that momentum;

iii. the vehicle was in four-wheel steer mode (intended for slow speed manoeuvring in tight, flat spaces) which increases the front and rear swing and destabilises the vehicle. This is particularly so at higher speeds and on uneven ground and

iv. the telescopic lifting boom carrying the grain bucket was raised to avoid obstructing the forward view. In that position, the boom/bucket raised the vehicle's centre of gravity, thus reducing its stability once it had started to gain momentum free-wheeling down the hill.

[16] It is submitted that none of those factors posed any real danger to Mr. Hamilton while he was in control of the vehicle and manoeuvring in a forward direction. It is submitted that a sequence of events which culminated in the vehicle overturning was started by nothing more than a momentary lapse or human error.

[17] It is the Crown's position that this was genuinely a tragic accident.

[18] In respect of the finding under section 26(2)(e), it is submitted that there are no precautions which, had they been taken, might realistically have avoided the accident itself occurring.

[19] The death of Mr. Hamilton might realistically have been avoided had he worn the seatbelt fitted within the vehicle which he was driving when the accident occurred. The vehicle was fitted with a roll over protection structure (ROPS). When the vehicle was examined by David Gostick, H M Specialist Inspector of Health and Safety, he found the ROPS to be present and intact, although it did appear to have sustained accident damage. Further, Mr. Gostick found the seatbelt of the vehicle to be wrapped around the seat in such a way as to make it impossible for it to have been worn by Mr. Hamilton at the time of the incident. He opined that the position, condition and appearance of the seatbelt and its buckle were consistent with it not having been used recently, if at all.

[20] It is submitted that the purpose of an ROPS is that, where the seatbelt is in use and the operator is restrained within his seat, he will be protected from being crushed by the weight of the vehicle in the event of an overturn. While ROPS may not prevent the operator from sustaining any injury, it is the opinion of HM Inspector of Health and Safety, Garry Miller that had Mr. Hamilton been wearing his seatbelt, he would not have been ejected from the cab and he may not have suffered fatal injury. He certainly would not have been crushed beneath the vehicle itself in the manner which occurred.

[21] I am invited to accept the evidence of Mr. Gostick and of Mr. Miller and to find that the death might realistically have been avoided by the wearing of a seatbelt.

[22] In relation to section 26(2)(f), it is submitted that the Crown has not identified any defects in any systems of working which contributed to the accident. The work being undertaken by Mr. Hamilton at the time of his accident did not require him to drive up the steepest part of the field towards the crest of the hill. His reason for doing so is unknown.

[23] The HSE Investigation Report identified no reason why the vehicle could not be driven within the particular field safely. In fair weather, with dry ground conditions, the manoeuvre in and of itself was not dangerous. It is submitted that the loss of control and subsequent overturn of the vehicle was the result of human error rather than a defective system of work. Therefore, I am not invited to make any findings in terms of section 26(2)(f).

[24] In terms of section 26(2)(g) and whether there are any other facts which are relevant to the circumstances of the death, it is acknowledged that the vehicle's service brakes were in a poor state of repair and, as a result, not in good working order. When the vehicle began to roll backwards down the hill, depression of the brake pedal would have generated braking force insufficient to stop it. That being said, in the ordinary course of his work, Mr. Hamilton relied on the vehicle's hydrostatic drive system's braking effect (that is the engine braking system) and the hand brake, both of which were fully operational.

[25] While issues with the condition and performance of the vehicle's service brakes ought to have been identified in pre-work checks, it is submitted that the person

responsible for those checks was Mr. Hamilton himself. It is submitted that little is to be gained from labouring this point further.

[26] Taking all things into consideration, I am not invited by the Crown to make any findings in terms of section 26(2)(g).

Discussion and Conclusions

[27] From the undisputed evidence presented to the inquiry, I conclude that Mr. Hamilton was fatally injured during an accident caused by a sudden loss of control of the Merlo P40.7 telescopic handler, registration number SN13 EUH, which he was driving.

[28] Mr. Hamilton's death might realistically have been avoided by the wearing of the seatbelt fitted within the vehicle. The vehicle was fitted with a roll over protection structure (ROPS). The purpose of an ROPS is that, where the seatbelt is in use and the operator is restrained within his seat, he will be protected from being crushed by the weight of the vehicle in the event of an overturn. While ROPS may not prevent the operator from sustaining any injury, it is the opinion of HM Inspector of Health and Safety, Garry Miller that had Mr. Hamilton been wearing his seatbelt, he would not have been ejected from the cab and he may not have suffered fatal injury.

[29] No defects in any system of working which contributed to the death have been identified.

[30] I consider that other facts which are relevant to the circumstances of Mr. Hamilton's death are that the service brakes of the Merlo P40.7 telescopic handler,

registration number SN13 EUH, were in a poor state of repair and, as a result, not in good working order. When the vehicle began to roll backwards down the hill, depression of the brake pedal would have generated braking force insufficient to stop it.

[31] I am grateful to Ms. Bell on behalf of the Crown for her careful preparation and presentation of the evidence. I am grateful to Mr. Hamilton's family for agreeing that the inquiry may proceed by written submissions in the current public health emergency.

[32] In her written submissions, Ms. Bell both on behalf of the Crown and herself, expressed sincere condolences to Mr. Hamilton's family, his friends and the wider farming community in East Lothian who have been affected by his death.

[33] Finally, I should like to extend my sympathy to Mr. Hamilton's family.