Case Studies:
The Human Hoist
Power Shop Chair

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ABSTRACT

Proper positioning of employees can be more effective and cost efficient than attempts to orient the workstation or work piece to the employee.

Modern ergonomics dictate that the employee be able to perform their assigned tasks while operating within prescribed ranges of motion to prevent injury. Traditional ergonomic methodologies typically focus on manipulation of the workstation or work piece to allow the employee proper access.

In some cases, reorientation of the work is not cost effective, or simply not possible. In lieu of proper work positioning, makeshift devices are constructed to allow the employee to prop, roll, or otherwise rig themselves into a position so that they can complete a task. Often this stop-gap measure allows limited access with poor positioning that requires overextension or other trauma to joints just so the employee can complete the task. When done in this manner, the task is often completed quickly to minimize discomfort, resulting in work that may not be in compliance with production standards. Eventually the employee could suffer an acute injury, and over time could suffer cumulative trauma requiring time off, therapy, surgery, and even disability.

Personal Positioning Devices can reduce or eliminate these poor work practices, decreasing cost, increasing efficiency, improving quality, reducing injury, and resulting in greater employee satisfaction.

INTRODUCTION

The following cases are representations of actual cases involving real customers. There has been no embellishment, but the names of most of the businesses and employees have been changed.

Hank

Hank was an exceptional employee. He was always on time, performed good quality work, and had a very positive attitude.

Hank worked on the assembly line, where he was responsible for adjusting and timing the mechanical linkages that operated the product. Hank took great pride in his work and his ability to do the job quickly, accurately, and without the need for assistance. This task was particularly challenging as, in the adjustment process, Hank was required to make an adjustment on top of the product, then climb below to check the adjustment and set the linkages for the next adjustment. For each product, he completed this up-and-down routine no less than 8-10 times, sometimes more to get the adjustments “just right”. Having held this job for the majority of his nearly 25-year career, he felt that he owned that particular job.

Over the course of time, Hanks’ Supervisor Trent noticed that Hank was moving a little slower than usual. Eventually Hank was not able to complete his tasks while the line was in his workstation – not like Hank. When asked why he was having trouble, Hank just replied “It’s this left foot, it’s just giving me fits. I’ll be fine.”

Time passed, and Hanks' work and attitude started to deteriorate. Trent admitted to sometimes taking the long way around rather than pass through Hanks' work area, so Hank didn't feel like the Trent was watching closely. One day a manager asked the Trent why this workstation was now often holding the line up, and why the Trent had not taken action.

Trent approached Hank one day after his shift and asked what he could do to help. Once again, Hank replied "it's just this foot." When Trent suggested a trip to his doctor to have it looked at, Hank hastily replied "I'll do it when I have time." Trent told Hank that he needed to correct the situation before Trent was forced to enter Hank into the disciplinary system.

Continuous Improvement Champion Allen heard of the situation, and asked Trent if he could speak with Hank about viable solutions.

Trent and Allen visited Hanks' workstation and reviewed the sequence of operations. Applying what he knew about Ergonomics, Allen knew right away that Hank was hurting himself performing his job. What started out as a sore knee resulted in broken bones in Hanks' foot as he strained to get up and down without further damaging his knee. Allen suggested that Hank be relocated to a less strenuous position, to which Hank replied, "Hell no, I've been doing this job for 20 years, and no pencil pusher is going to take me off it!"

Allen started searching on the internet that night and found Human Hoist. This looked like the solution he needed. After discussing the corrective action with his manager, the following morning, Allen called Human Hoist for a quote. "Wow," Allen commented, "that's a lot for a chair"! But he knew that the cost of the

Human Hoist paled in comparison to the value that Hank brought to the job, and he pushed the paperwork through.

When the Human Hoist was delivered, Hank was overjoyed. He immediately started rearranging his work area and footprinted the floor with white tape to provide a storage place for the new Human Hoist.

The following weeks were a relief to Hank, Trent, and everyone else working nearby. Hank returned to his old, jovial self, and was no longer causing line stoppages. His job secure, Hank finally decided to have the surgery he needed to repair his foot. He scheduled surgery and told Trent he'd be back in 12 weeks. It was just about that time that the plant went on 12-hour shifts – Hank hated to miss the overtime, but felt it was time to get his foot fixed.

8 weeks later, Trent got a call from Hank. Hank reported that he felt great and was ready to return to work. The line was still working 12 hours, and Hank wanted to take part. Trent contacted Allen, who suggested a call to the company doctor. After explaining the entire situation to the Doctor, and that Hank would in

fact only be on his feet for 14 minutes out of every hour, the Doctor agreed and said that Hank could come back to work but had to use the Human Hoist as a requirement for return.

This was the first case where the Human Hoist was implemented in a Stay-at-Work", and a "Return-to-Work" case at the same time. Truly a win-win for Hank and the Company.

James

James is an excellent diesel mechanic with a bright future. After completion of his schooling, he was hired by Speedy Trucking, a family-owned regional carrier. James was with Speedy for 3 years and was well liked and fit well with the team.

One spring morning, James was struck by a car while on his way to work on his new motorcycle. Despite their best efforts, surgeons were not able to repair the damage, and James lost his right leg at the knee.

Speedy owner Dwight assured James his job would be waiting upon his return. Once James completed therapy and was cleared to return to work, he discovered that working on a prosthetic was going to be a challenge. While he found ways to get up and over obstacles to complete his work, getting down on the floor, maneuvering, and getting back up again was simply not possible.

Once again, Dwight assured James that he was a part of Speedy now, and that they would move him to an office position. Over the course of time, it was decided that James was much better in the shop than he was in the office.

Dwight found Human Hoist online. He called and got the information and said, “We’re going to get one of these, this kid is worth keeping”.

When the chair was delivered, James was rolling around the shop and under trucks in a matter of minutes. He took a lot of good-natured ribbing from the other mechanics, as they debated a new knick-name for him – “Wheels” or “Scooter”.

Dwight's was very grateful that Speedy could retain this valuable employee, commenting at one point "You guys saved this kid's job".

Robert

Robert retired from his career in the military and went to work in a major city, eventually becoming a detective. Having survived two tours in Afghanistan, Robert was struck down by a bullet in the back in a shoot-out.

Robert left the department under disability. He was as upbeat as possible; the house was paid for, the kids were though college. But the reality of the situation finally set in, and he realized he could no longer putter with his cars in the garage. In time, depression set in, Robert began abusing pain killers, and contemplated ending his life.

One day while surfing the internet, Robert came across a Human Hoist video. After speaking with Kevin, Robert decided he absolutely had to have one. Being on disability for 3 years, it quickly became apparent that he would not be able to get a loan to purchase the Human Hoist. Robert talked with his wife, and the decision was made to refinance the house so Robert could buy his Human Hoist.

"This is the greatest thing ever; I haven't spent time in the garage with my buddies in years!" Robert shared. "Now I can finish the wife's Camaro and we can hit the car cruises. This thing saved my life."

Justin

Justin is a young welder in a body shop. “Body by Stu” not only did crash repair and paint but had developed a reputation as a chassis builder and classic car restorer. Justin was incredibly grateful to be hired, as he’d lost his lower limb mobility in a motorcycle crash when he was 18. Now twenty-eight, his body was beginning to feel the effects of moving around using only his arms. Jobs he had done in the past were now simply too painful to do, and he began asking for easier assignments.

One day while eating his lunch, Justin came across a Human Hoist video on Facebook. After a call to PPT, Justin learned that a driving prototype of the Human Hoist had completed testing. His next call was to Margaret, his counsellor at the Division of Vocational Rehabilitation, a part of the Colorado Department of Labor Employment (CDLE). After a brief consultation with Margaret, he was excited to tell Stu about what he had found.

Margaret emailed PPT from our website, explaining the situation, and that there was federal funding available for this very type of situation. Margaret pushed the paperwork through, and the CDLE bought the prototype, sight unseen.

When we delivered the new product, named the Mobile Shop Chair, Justin was ecstatic. He moved more smoothly with each use, and before long was experimenting with positioning himself around and under vehicles.

Seeing his success with his new tool, Stu decided to purchase a new Power Shop Stool for himself.

Brian

This case is a bit different in that it is available in the public domain.

Brian, an ironworker from Ohio fell more than seventy feet from a crane while working. As rescue workers loaded Brian into the ambulance, Brian came to and was thankful to be alive.

Once at the hospital, the severity of Brian's condition became clear – he had broken dozens of bones, and if he survived, he would most certainly be paralyzed. Following years of therapy and recovery, Brian was discharged from the Hospital.

After a stay in a hotel while Brian's home was modified to accommodate his wheelchair, Brian returned home. Over the coming year, Brian's demeanor deteriorated, and began taking a toll on his family. In an act of desperation, Brian's son wrote the Doctor Phil show, and told his story.

The staff of the show immediately took interest in the situation and contacted PPT about the possibility of donating a chair in exchange for the exposure that could be provided by the show. Below is actual text from the email the show sent to PPT

> Hi Steve,
>
> A pleasure talking with you!
>
> The guest lives in Canton, Ohio and will be virtual.

Here's a brief summary of his story:

The guest says living as a paraplegic is very difficult, he broke over 52 bones and has metal all throughout his body. He says that he also feels like the fall messed up his memory and that is the

reason why he's failing in school (college classes). He says he has pain
constantly and it's frustrating for him. Brian says he wishes his family would be more understanding how hard his life is for him. The accident is causing a huge strain on his family and relationship. He needs a device to help him become more independent and be a productive member of society.

Steve

The PPT Board decided to accept the project, and a chair was delivered to Brian.

See the rest of the story on our website at: www.humanhoist.com scroll down to the Dr. Phil Segment.

Otis and Devin

Otis and Devin, despite living in different states, have remarkably similar stories. Otis is a Heavy Truck Mechanic in Texas and Devin runs a small auto repair shop out of his home in Iowa. Both men were suffering from crippling back pain and were struggling to work but wanted to keep working. They reached out to their respective Vocational Rehabilitation offices, worked with the counsellors, and both received Power Shop Chairs through the Vocational Rehabilitation programs. Both are still happily at work, able to maintain their independence, support their families, and do the work they love.

Conclusion

Personal Positioning Technologies is changing lives – allowing injured people to do the things they want and need to do and allowing people with disabilities to perform tasks which they were previously unable to do.

It's important to understand that many of the cases presented here are the result of long term, cumulative trauma from decades of bending, stooping, and crawling on the ground. Each of these cases could have been prevented by the implementation of a personal positioning product on the job before the employee was injured. Leading manufacturers are now assessing risk and providing ergonomic and assistive devices in jobs where recordable injuries and employee data show substantial risk of Musculo-skeletal injury.

Please contact us for more information.

FOR MORE INFORMATION

Visit www.humanhoist.com

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