JOSEPH L. ERTL, INC.

Corporate office of divisions:
SCALE MODELS *and*
DYERSVILLE DIE CAST

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September 29, 2011

Received CPSC
2011 OCT -6 A 10:33
Office of the Secretary
FOI

Office of the Secretary
US Consumer Product Safety Commission
4330 East West Highway
Bethesda, Maryland 20814

RE: Section 101 Request for Exemption from 100 ppm Lead Content

The Commission was not able to determine that 100 ppm total lead content is not technologically feasible as staff found that materials containing less than 100 ppm total lead content ***are commercially available in the marketplace for manufacturers.***

The above statement is taken directly from the CPSC Release #11-278, dated July 15, 2011. The above statement severely crippled our farm toy business on August 14, 2011. This is our story:

We are an American-made, Iowa-based company with a 33-year reputation manufacturing farm toys. Our niche market is ride-on pedal tractors, sized for children ages 3-10. We sell nostalgia; with many products sold to parents and grandparents with rural American roots. Our pedal tractors are purchased specifically for their children, grandchildren or for display purposes for adult collectors.

Our tooling and equipment (investments > $10,000,000) is designed to create aluminum die-castings from A380.1 alloy. Aluminum alloys are derived from recycled scrap metal to create ingots; ingots with lead content that is certified per heat but often greater than 100 ppm. Alloyed metal is based off the quality of the scrap it is derived from. Alloyed metal is not a homogenous product, and never will be.

We are a small manufacturer with 2011 sales around $1,000,000. The restrictions and penalties imposed by CPSC are not a risk we are financially willing to take. We do not employ attorneys or scientists. It breaks our corporate heart to exit the farm toy business, a business our founder, Joe Ertl, has participated in for the past 65 years. Yet, it is not worth the continued risk, imposed by our government, unless we are granted a permanent waiver from the CPSC.

Therefore, please accept and approve our submission to the *Section 101 Request for Exemption from 100 ppm Lead Content.* It is our hope that our request will be granted.

Thank you.

Sincerely,

Jane Ertl
Executive Vice President
563/875-2436, x226

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Section 101 Request for Exemption from 100 ppm Lead Content

(i) *A detailed description of the product, class of product, material, or component part, which contain lead in excess of 100 ppm, and all relevant data on manufacturing processes or procurement processes which make it impracticable or not technologically feasible to manufacture such product by removing the excess lead (over 100 ppm) or making the lead inaccessible.*

THE PRODUCT

The products are die-cast ride-on pedal tractors, scaled for children ages 3-10. Attached is a photo representation of the product line[1] (*Attachment 1).* The components in question are the aluminum metal die-castings, listed below. All of these components are commercially powder coated at our facility. Powder coating, as well as the protective guard added to the bottom of the body casting at final assembly, makes the lead inaccessible to a child:[2]

- Body castings (right & left sides). Average weight = 6 lbs each - *(Attachment 2)*
- Rear wheel hubs (2 per unit). Average weight = .5 lbs each – *(Attachment 3)*
- Wide front axle yoke (only if the replica requires front tires in a wide front-end formation - 1 per unit). Average weight = 2.5 lbs – *(Attachment 4)*
- Wide front-end adaptor bracket (only if the replica requires front tires in a wide front-end formation - 2 per unit). Average weight = .4 lbs each – *(Attachment 5)*

THE DIE-CAST MATERIAL - ALLOYS

Die-casted products are manufactured via one of four commercially available alloy families:[3] aluminum, magnesium, zinc or zinc-aluminum. The major considerations to determine the best alloy family for the product include: cost & weight, structural properties, surfacing finishing & coatings, corrosion resistance; and bearing properties & wear resistance.

Aluminum is the best alloy of choice for our application. The reasons for selecting an aluminum alloy for pedal tractor production over the other alloy families include:

- **Weight** – Zinc is 2.5 times the weight of aluminum. A child's pedal tractor processed in aluminum has an approximate weight of 16.5 pounds. The same castings processed in zinc would weigh approximately 41.25 pounds. The assembled weight of an assembled *aluminum* pedal tractor is approximately 35 pounds.[4] In *zinc* the assembled weight would be 60 pounds.[5]

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[1] The promotional flyer chosen is from our 2009 product line to CNH. This page from our flyer was chosen as it shows narrow front and wide front versions of pedal tractors. The back side shows 1:16 scale farm toys, made of zinc. Within the scope of this submission we focus directly on children's pedal tractors.

[2] 10" wheel included in each photograph for size reference purposes, only.

[3] All data concerning the die-cast industry is referenced from NADCA Publication #402; NADCA Product Specification Standards for Die Castings. ©2009, 7th Edition
For more information on North American Die Casting Association see: www.diecasting.org.

[4] The die-castings referenced in Exhibits 2-5 account for 16.5 lbs of the total assembled weight of 35 lbs. Therefore, the balance of the components weighs 18.5 lbs. In addition, to die-cast a product there is a 10%

Assuming the end-user is question weighs 80 pounds the zinc product would be 75% of their total body weight. Virtually impossible for the average 80 pound child to maneuver.

- **Cost** – Aluminum is the lowest cost alloy per unit of volume. When factoring the large number of additional components necessary to complete the toy aluminum is an economical choice. The product's overall cost is > $125.00 per unit.[6] The cost of the aluminum is approximately $20.33 or 16% of the overall cost.[7]
- **Structural Properties –** not a major factor in the decision to cast pedal tractors in aluminum alloys over zinc alloys. Yet, do we address the fact that we own aluminum presses for other purposes and found a creative outlet to increase our machine utilization. For instance, if we decided to retool products away from aluminum die-casting and instead, use plastic molding, our R&D, tooling costs and machinery & equipment costs would make this a poor investment. Our customers prefer the durability of metal farm toys over plastic farm toys.
- **Surface Finish & Coatings** – all die-cast products requiring surface finishing from either our zinc or aluminum casting departments can be treated with a variety of mechanical or manual surface finishing process as well as powder coating. Surface finishing & coatings is not a deciding factor for manufacturing pedal tractors in aluminum over zinc. Yet, we utilize a state-of-the-art powder coating process and have been powder coating all of our toy products since 1990. Therefore, our machinery, equipment and processes are in place. All metal surfaces exposed to a child are powder coated or contained by the addition of a steel chain guard enclosure under the bottom of the body casting. Our Quality Assurance and ISO 9001:2008 processes verify commercially acceptable standards.
- **Corrosion Resistance –** Powder coating is the best finish we can apply at our facility. Powder coating is acceptable for all our toy application. Corrosion resistance, such as salt spray, anodizing, plating, e-coating etc., is not a concern of the toy industry. Therefore, we are able to select A380.1 – the most universal and economical aluminum alloy commercially available in North America.
- **Bearing Properties & Wear Resistance –** the intended use of the product is for child's play or display purposes. In relationship to the bearing properties and wear resistance in other industries serviced at Dyersville Die Cast,[8] such as the outdoor lighting industry, boating industry, etc., a force placed on a pedal tractor by a child is minimal.

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material factor above the 16.5 lbs to account for die configuration (gates, runners, etc.) which are considered as self-generated scrap and re-melted at the furnace.

[5] Since zinc is 2.5 * the weight of aluminum, 16.5 lbs * 2.5 = 41.25. 41.25 lbs + 18.5 lbs = 59.75 lbs or ≈ 60 lbs.

[6] 16.5 lbs * 1.10 (scrap factor) = 18.15 lbs. 18.15 lbs * $1.12 (today's cost for A380.1) = $20.33

[7] $20.33 / $125.00 = $16%

[8] See www.dyersvillediecast.com the website of our sister company for details on our processes. Our core competency is aluminum die-casting yet we have a number of value-added other processes.

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Section 101 Request for Exemption from 100 ppm Lead Content

Scale Models has been a farm toy manufacturer since 1978, mainly producing zinc replicas of historical and modern farm tractors & implements.[9] In 1994 we began manufacturing aluminum die-cast pedal tractors. The aluminum alloy selected was A380.1, the widely used commercial alloy, offering the best combination of material properties, ease of production, accessibility and cost.

The pedal tractor components in question in Exhibit 2-5 are manufactured via the aluminum die-casting process. As stated above, the standard commercial aluminum alloy used for pedal tractors is A380.1. Today's London Metal Exchange (LME) price for A380.1, delivered to Dyersville, is $1.12/pound.[10]

THE DIE-CAST MANUFACTURING PROCESS

The die-casting process begins with an alloyed ingot of metal, which is melted to a temperature between 1200-1400 degrees Fahrenheit. The molten metal is poured into a cold-chamber press containing a heat-treated steel mold (die) configured to the end user's specifications. Under the desired pressure the molten metal solidifies within the cavity of the mold to create the metal casting, or part. After the casting is properly formed to the configuration of the mold, the mold is open in half so the casting can be ejected or released from the mold. The casting is either rapidly cooled via a quenching process or placed on a designated cooling rack, platform, conveyor belt, etc. After the casting is cooled to an appropriate temperature the excess metal (scrap) is trimmed from the casting. The trim press contains a trim die configured into the design of the final casting. Trimming is usually accomplished via a horizontal or vertical trim press, which sheers the runner, gate and overflows (self-generated scrap) from the casting.

Next, the casting may need additional value-added processes, such as, flatness check, deburring, scale weighing as well as an inspection check. Acceptable castings are placed in the designated container for movement to the next department. The unacceptable castings and/or self-generated scrap are recycled and re-introduced to the melting furnace along with additional raw ingots.

When a die-casting facility, such as Dyersville Die Cast, melts various alloys the proper material handling and quality control of all self-generated crap is extremely critical. As mentioned above, each alloy has its unique characteristics within the alloy family. As a custom die-caster, Dyersville Die Cast processes six different alloys for a large number of customers. To verify proper alloy usage we color-code all raw

[9] Zinc alloys have lead content < 100 ppm.

[10] Pricing explanation from Allied Metal Company: *When you refer to A380.1 on the "LME," there are 2 types: 1. Available worldwide. 2. Available in North America. I assume you would want North American Production. Next is the pricing structure... In order to get LME A380.1 "North American Specialty Aluminum Alloy" (NASAAC) delivered to Dyersville, IA there are several surcharges along the way. 1st and foremost, you need to pay cash and wire the money. Next, you have all kinds of surcharges... 1. If you specify a brand it is a penny/pound. If you specify ingot over t-bars it is a penny/pound. If you want delivery out of Chicago, it is a penny/pound. To put it on a truck the warehouse charges a penny a pound. Last figure $.02 to freight it to Dyersville. So...today's NASAAC price is $1.03/lb. If you factor in all of the above charges you are around $1.11-$1.12 delivered. Oh, and did I mention you can't get it within the next 30-90 days since a lot of the physical material is tied up in financing deals...?*

ingots as well as take alloy samples from melting furnaces on a daily basis. The drawn samples are formed from a 2" diameter circular ingot figuration. When cooled, the sample is faced via a lathe to form a smooth, flat surface. Next, the chemical make-up of the sample is tested via our in-house spectrometer. [11]

THE DIE-CAST RECYCLING PROCESS

Die-cast alloys offer the world and environment the most advantageous recycling options of all non-ferrous materials, with a proven recycling infrastructure in place. Die-cast parts, such as found in automobiles and trucks, recycle or reclaim over 85% of the aluminum from each vehicle. The circle of recycling to create a die-casting is very simple, for example:

- *recycled items, such as vehicles, are collected;*
- *the items are re-melted with other aluminum scrap to create alloyed ingots;*
- *alloyed ingots and self-generated scrap are used to create a die-casting.*

From a recycling standpoint, die-casting is a very *green* industry.

Die castings are not hazardous waste and pose no problems in handling or reprocessing, as some non-metallic parts do. Aluminum die-casting alloy recycling has been in place since from the beginning of custom die-castings production in the 1930's. A wide variety of aluminum scrap can be reprocessed to produce all of the most widely specified die-casting alloys.

Over 95% of the aluminum die-castings produced in North American are made of post-consumer recycled aluminum. Since the production of recycled aluminum alloy requires approximately 5% as much energy as primary aluminum production, there is a dramatic conservation of non-renewable energy resources. As an example, die-castings, as opposed to forgings or extrusions, can make far greater use of recycled materials. What is impossible to control in alloy production is the chemical make-up of each heat. An alloy will be *chemically within specifications* overall, but a spot check of the alloy properties will show chemical variety. In other words, alloy ingots are not homogeneous. [12]

[11] Dyersville Die Cast uses a Baird FSQ foundry Spectrovac Spectrometer, Serial #2572A. The daily ingot samples are analyzed and any out of spec results are discussed with the Aluminum Die Cast Manager or his representative. The sample data is stored to the hard drive and also printed out and saved with the actual ingot sample.
[12] The variation is alloy sample testing will be discussed in Section (iv).

Section 101 Request for Exemption from 100 ppm Lead Content

Attached is a certified analysis for A380.1, received from our supplier, Allied Metal Company. [13] *(Attachment 6)* In addition, Allied Metal is aware of the Section 101 decreased lead content necessary for our toys. Attached is an email correspondence addressing how Allied Metal is assisting our needs by setting aside A380.1 heats exhibiting <300 ppm chemistry. *(Attachment 7)* The decreased lead content is available, by chance only, but not consistently obtainable.

[13] Allied Metal Company, 1300 Kostner Avenue, Chicago, IL 60651, 312-225-2800. www.alliedmetalcompany.com Metal ingots are purchased from four suppliers. Allied is our largest and oldest supplier of aluminum alloys within the 41-year history of Dyersville Die Cast, our sister company.

(ii) Whether the product, class of product, material or component part, which contains lead in excess of 100 ppm is likely to be placed in the mouth or ingested, taking into account normal and reasonably foreseeable use and abuse of such products, class of product, material or component part by a child.

THE ASSEMBLY OF THE COMPONENTS IN QUESTION

For shipping purposes, pedal tractors require final assembly by the adult end-user. Attached is our Pedal Tractor Assembly Instruction Sheet *(Attachment 8)*. General assembly includes:

- The main body, this casting assembly is commercially powder coated and ready for all additional components.
- Chain assembly, which includes all components affiliated with the ability to power the unit via the foot pedals, chain, pedal sprocket, and rear axle sprocket.
- The front axle assembly, which includes the front wheels and commercially powder coated wide-front mounting brackets and wide-front axle assembly (if needed for a wide-front end tractor version).
- The mounting of the commercially powder coated rear wheel hubs, rear wheels, hub caps, axle pin and plastic fenders (if included with the specific model).
- The plastic seat, plastic steering wheel and vinyl decorative decals.
- A properly assembled pedal tractor does not permit the child to come in contact with unpainted powder coated metal.

THE INTENTED USE OF THE PRODUCT

A child, typically between the ages of 3 and 10, is the appropriate end-user for our pedal tractors. The assumption is that the product is appropriately assembled by an adult. Pedal tractors are typically used indoor in a basement (in mid-west winters), shed or other out-building. Or used outdoors in a garage, on a driveway, a yard, etc. A pedal tractor requires a lot of physical exertion to maneuver by a child. The youngest children may only sit on the product, holding the steering wheel, under adult supervision. Normal use would be:

- The child approaches the product from the left or right hand side, possibly touching the top of the body casting and/or steering wheel when reaching the toy.
- Positioning their body at an angle to face the toy, the child grabs the plastic steering wheel with one hand, possibly grabs the plastic seat with their other hand.
- The child straddles the body casting between the steering wheel and seat. At this point, the child is facing the front of the tractor typically with both hands on the steering wheel.
- The child sits on the seat.
- When seated and holding the steering wheel, the child raises his or her feet to the foot pedals.
- The power to move the toy comes from the strength of the child's foot action. While pedaling, the child is pulling on the steering wheel.
- The child turns the steering, similar to steering a car, in the direction the child wishes to travel.

- To dismount, the child removes his or her feet from the pedals, stands on the ground, swings his or her inside leg away from the toy and simply walks away.

Therefore, under normal use, the child is primarily touching the plastic steering wheel with his or her hands. The steering wheel is used to steer the pedal tractor as well as to provide leverage while pedaling. An additional area the child may touch is the hitch pin on the back of the pedal tractor. The purpose of the hitch pin is to connect or disconnect a pull behind object.

Outside of the body castings, the aluminum die-cast components itemized on page 1 are not touched by the child during normal use. The typical areas of the body casting which may be touched during play, but not actual use, include the front or top of the body casting, the center of the body casting between the seat and steering wheel and the hitch pin area at the back of the body casting. All metal casting surfaces are powder coated and too large for a child to place in their mouth.

POTENTIAL LEAD ABUSE OF THE PRODUCT

The smallest die-cast component, front -end adaptor bracket, is approximately 4" x 3" and weighing .4 lb *(Attachment 5)*. The end-use adult purchaser/customer is required to assemble this part to the body casting. For the exact location of this component, see the Pedal Tractor Assembly Instruction Sheet *(Attachment 8)*. All metal castings are powder coated with lead-free substrates. Attached is the MSDS Section 2: Composition/Information of Ingredients *(Attachment 9)*. A child would be not exposed to the raw component castings nor be affected by lead paint on the powder coated casting. A steel plate, known as a chain guard, covers the bottom of the body castings so there is no access for the child to touch the aluminum casting.

Scale Models believes the opportunity for a child to be exposed to a lead concentration above 100 ppm is impossible. Only the body casting *(Attachment 2)* is in direct contact with the child during normal play. The size and weight of even the smallest aluminum casting potentially containing lead *(Attachment 5)* is impossible for a child to swallow. Plus, the component is located underneath the body casting and above the front wheel assembly, far away from where a child would normally play or sit on the pedal tractor. The need for adult assembly eliminates the possibility of a child becoming in contact with the aluminum castings as individual pieces. The product will not properly function without prior adult final assembly.

(iii) Whether an exemption for the product, class of product, material, or component part will have a measureable adverse effect on public health or safety, taking into account normal and reasonably foreseeable use and abuse.

THE HEALTH & SAFETY ASPECT OF THE PRODUCT

The intended purchaser of our products is adults as the products sell for greater than $125.00. Our products are not something a young child could readily or easily purchase such as candy in a convenience store. Our toys are purchased by the consumer via one of four distribution channels:

- Agricultural dealership parts departments
- Regional farm-related merchandizing chain stores, such as Fleet Farm, Farm & Fleet, Tractor Supply Company
- Toy shows or agricultural-related special events (collector edition promotional products)
- Internet sales

In many situations, our products are sold as special label promotional items commemorating a specific dated event. For many adults, the price makes the purchase a well thought out purchase instead of an impulse purchase. The price and the durability of the product relate to a high quality product. The assumption is that the adult purchaser would not spend the money on this toy if they viewed it as harmful to their child or grandchild. Many purchasers had similar products when they were children. Today they purchase our pedal tractor to add to their farm toy collection.

Scale Models' die-cast pedal tractors have been on the market for 16 years. Included with this submission is our Scale Models Collector Guide. This 200+ page book gives a thorough explanation of our products and company history from 1978 – 2006.

When the Consumer Product Safety Improvement Act of 2008 (CPSIA) initially decreased the lead content from 600 ppm to 300 ppm, we destroyed (re-melted) over 2000 sets of pedal tractor castings. Due to the highly recyclable nature of aluminum alloys we were able to reclaim the majority of the metal. Yet, this action resulted in an $8000+ scrap loss as well as productivity and overhead losses. Destruction of all raw material inventories was our first course of action. Our second course of action was to submit written comments, electronically, to the CPSC prior to the February 2010 public comment deadline. Thirdly, in May 2010 we contacted our United States Senators; Chuck Grassley and Tom Harkin as well as the CPSC for their assistance and support with this *Made in the USA* niche product line.

We have kept abreast of the CPSIA's actions and adhered to the changes. Our diligent reaction has cost us lost sales and lost customers. This change resulted in 20 lost American manufacturing jobs and $2-3 million in annual sales. Fortunately Dyersville Die Cast, Scale Models' sister company, was able to absorb the majority of the displaced employees. The lost sales to Scale Models are gone forever.

(iv) Detailed information on the relied upon test methods for measuring lead content of products or materials including the type of equipment used or any other techniques employed and a statement as to why the data is representative of the lead content of such products or materials generally (MSDS sheets will not be sufficient to satisfy the representative testing criteria because they do not show sufficient information regarding lead content. Rather, the showing necessary to obtain a determination must be based on objectively reasonable and representative testing of the material or product).

Today, our annual toy sales are approximately $1 million, down from $3 million in 2008 (prior to the first decrease in lead content). A small business, such as Scale Models, cannot employ scientists to validate our products nor attorneys on staff to defend our actions. Product batch testing via a third party testing lab has been implemented. Following are test methods, which have been utilized or remain utilized in our process:

THE TEST METHODS

- **ISO Quality Certification** - In 1999 we completed the process to be a universally standardized quality manufacturer via the ISO 9000 family of standards systems. Today we are compliant with the 9001:2008 requirements. Our Work Instruction WIDC-10 addresses Alloy Verification Process for Die Casting. *(Attachment 10)*
- **External Raw Materials Analysis** – As mentioned above, we purchase our ingots from four different regional sources, with Allied Metal Company being our largest source. All truck loads (semis) received are accompanied with a certified metal analysis *(Attachment 6)*.
- **Internal Controls for Metal Handling** - Our lead metal handler inventories each alloy by color-coding the stacks of ingots. Likewise, each die-cast cell is color coded to represent the alloy being processed for the job. Self-generated scrap is directly re-introduced to the furnace at each machine.
- **Internal Raw Materials Analysis** – Daily we conduct an internal metal analysis with our Spectrometer.[14] Attached is the result of our most current testing of A413.1, which represents our most recent casting run for pedal tractors. *(Attachment 11)*
- **Elemental Research** – In May 2009, we conducted our first round of third party testing to comply with the CPSIA Act of 2008. Elemental Research Laboratory[15] was selected. Their testing concluded that all components were within specification except for the aluminum body casting, manufactured from A380.1. The duplicate samples tested from this component were 625 ppm and 603 ppm. From here, we worked with Allied Metal to obtain an alloy containing <300ppm.

[14] For details reference Footnote 10 as well as *Attachment 10,* WIDC-10 Alloy Verification Process for Die Casting.
[15] Elemental Research LLC, 4601 Devonshire Road, Harrisburg, PA 17109. In March 2009, Scale Models shipped a complete set of pedal tractor components to this lab for lead content testing. We know this data is obsolete but strive to show our pro-active approach to compliance of the CPSIA ruling. In reviewing the CPSC list of accredited labs, Elemental Research, LLC is listed. Yet, via the Internet and by calling the phone number the firm cannot be found.

Again, these results were received in May 2009 and today are obsolete. Yet, this testing verified that all other components of the product were within acceptable lead content limits. *(Attachment 12)*

- **Stork Twin City Testing Corporation** – Third party testing was repeated for five toys castings samples in September 2010 by Stork Testing Lab, St Paul, MN.[16] *(Attachment 13)* The most current results are from September 2010. Of the five samples only one, TCT#4438-3, a toy combine, was at 300 ppm. Additional testing was considered for inclusion with this report but time was our constraint due to the September 30, 2011 submission deadline. When we recently talked to Stork their lead-time would not allow us to have test results before October 2011.
- **Technological Feasibility of Reducing Lead Content to 100 ppm: Compliance Data** – This memorandum, addressed to the CPSC Commission, contains an analysis of ten samples from one single piece of an aluminum alloy casting. The results of the ten samples of this single piece of material ranged from 82 ppm to 126 ppm with an average of 103 ppm.[17] *(Attachment 14)* The result of this larger sample proves the fact that alloyed aluminum is not a homogeneous product.

[16] Stork Twin City Testing Corporation, 662 Cromwell Avenue, St. Paul, MN 55114 www.storksmt.com/tct STCTC is listed as an accredited lab for the required testing. Conversations were held with Kevin Beck, Chemist, 651-645-3601. Turnaround for additional testing is > 2 weeks. Therefore, to comply with our September 30, 2011 deadline we were unable to submit additional samples for further testing.

[17] Memo for Office of Compliance to the CPSC Commission dated June 29, 2011.

(v) Any other relevant data or information applicable to the request.

HISTORICAL METHODOLOGY – Scale Model Toys

As stated, Scale Models has been in the agricultural toy replica niche market since 1978. Along with our sister company, Dyersville Die Cast, we are a solid, well-established manufacturer in our community. We are an Iowa-based, privately-owned S-Corporation with family leadership and management. We are strongly committed to American manufacturing. To learn more about Scale Models and our founder, Joe Ertl, please see our 2006 Scale Models Collector Guide, included with this submission.

HISTORICAL METHODOLOGY – The Farm Toy Industry

The metal toy industry, including the metal farm toy industry, grew rapidly with the conclusion of World War II. Manufacturing opportunities were growing, baby boomers were being born and new processes in metal melting and plastics were being developed. Prior to WW II the majority of metal toys were cast iron. Outside of this statement, we believe the development and then consolidation of the industry is beyond the scope of this submission. Long story short, within the industry, we believe Scale Models is the only remaining USA die-cast metal toy, licensed manufacturer remaining. All former manufacturers today import toys from China.[18]

PRODUCT DEMAND

As the farming industry consolidated from family farms with large families, to farming corporations and small farm families, the demand for farm toys has decreased. When Scale Models was established in 1978 there were 13 U.S. Original Equipment Manufacturers (OEM's). Today, there remain three major U.S. OEM's; John Deere, AGCO and Case New Holland (CNH).

Our significant decrease in sales began as the OEM's consolidated. Strategically, adapted our business model away from small toys (1:16 scale is the industry standard) to the pedal tractors. *See Scale Models Collector Guide*. We focused on the niche, which we believed would be the most difficult to import as pedal tractors are large, heavy and lower volume sales.

PRODUCT SUPPLY

The barrier of entry into the pedal tractor niche market is expensive; from an R&D, tooling, and machinery standpoint. An additional barrier to entry is licensing. The major OEM's strongly control the use of their brands to protect their licensees and minimize knock-offs. We are fortunate to be a licensed vendor to all OEM's but without a Section 101 exemption we cannot manufacture product to cover the minimum guaranteed royalties we must contractually pay.

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[18] A Google search *for Farm Toy Manufacturers* lists Tomy (Ertl brand toys), Spec Cast and Scale Models, all Dyersville, Iowa entities, as first page options. Of the three, Scale Models is the only remaining US manufacturer. Also included are National Farm Toy Museum, National Farm Toy Hall of Fame and a few Mom & Pop hobbyists, who build or customize farm toys but are not licensed entities.

Section 101 Request for Exemption from 100 ppm Lead Content

Today, our overall product demand has increased due to the scarcity (lack of supply) of our products in the marketplace. The scarcity is solely due to the CPSIA Section 101lead content changes. As we stated earlier, the decreased ppm in lead content resulted in the scrapping of over 2000 units of saleable toys, destroyed solely on the basis of a date in time (August 14, 2009). These products have never been replaced.

In the past two years we have been diligent with our actions to avoid violation of the lead content requirements. The imposed penalties are a risk we will not take.

SCALE MODELS' SUBMISSIONS TO THE CPSC HEARING PROCESS:

As referenced on page 7 we actively communicated our concerns in the following manner:

- submission to the public comment hearing prior to the February 16, 2010 deadline;
- submission to Senators Chuck Grassley and Tom Harkin in May 2010;
- additional submission to CPSC in May 2010.

After the final CPSC ruling, we reviewed all materials available, including the statements from the Commissioners. We sincerely appreciate Commissioner Nancy Nord's comments as she spoke our sentiments as an American farm toy manufacturer![19]

THE BICYCLE INDUSTRY

With interest, we have followed the lead content exemption given to the bicycle industry via the Bicycle Parts Suppliers Association (BPSA). The research conducted by the Gradient Corporation[20] in reference to metal exposure to children also reflects the pedal tractor industry. We believe the pedal tractor industry has more metal body surface but less metal exposure, due to the lack of steel and brass. We assume that the number of hours a child may spend on a pedal tractor is less than the number of hours of play on a bicycle. The scientific evaluation by The Gradient Corporation of components manufactured from certain lead-containing alloys used within the bicycle industry concluded:

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[19] Excerpts from Commissioner Nancy Nord's July 13, 2011 statement:
This is not the first time the majority has disregarded the costs to both businesses and consumers. Businesses told us that they aren't sure they can get the materials to make products to this onerous new standard. ...it is going to be much more expensive...They told us they'll have to stop making some products, products that are safe and legal right now. Some told us they will go out of business entirely, especially small businesses who can't get the materials they need and can't risk CPSC penalties...
As the majority went through the process they used to reach their conclusion, we heard from companies big and small across the children's market that, even if it is possible to meet the 99.99% standard, it is not possible to do so reliably with recycled materials. There is just too much variability in the quality and composition of those materials. Faced with massive enforcement penalties, the companies cannot afford to risk making a product that is only 99.98% lead-free...

[20] Exposure Evaluation of Manufactured Components in Consideration for Exclusion from the Consumer Product Safety Improvement Act (CPSIA), January 26, 2009.

Section 101 Request for Exemption from 100 ppm Lead Content

> *"We have determined that the lead content in brass, aluminum, and steel alloys in certain components of these products does not present any risk of a measurable increase in blood lead levels in children and that an exclusion is therefore appropriate for such components."*[21]

Components used in bicycle manufacturing are more complex in design and in materials than components used in our pedal tractor products. The age grade for both products is similar, with bicycles being sized to fit larger and older children and adults. The primary hand position on a pedal tractor is the plastic steering wheel. On a bicycle it would be the steel handlebars, possibly encapsulated with plastic or taped hand grips.

It is our belief that a child exposed to a pedal tractor also has exposure to products referenced in the BPSA's exemption; such as a bicycle, jogger stroller and/or bicycle trailers. Since the CPSC has exempted the bicycle industry from the Section 101 lead content requirements t is our hope that the Commission will likewise exempt Scale Models' American-made pedal tractors from the same requirement.

[21] This is a direct quote from the Introduction of the above referenced Gradient Corporation report.

Joseph L. Ertl JOSEPH L. ERTL, INC.

Corporate office of divisions:
SCALE MODELS *and*
DYERSVILLE DIE CAST

301 Fifth Street NW
PO Box 327
Dyersville, Iowa 52040-0327

phone 563-875-2436 fax 563-875-2753
www.scalemodeltoys.com
www.dyersvilledicast.com

September 29, 2011

Office of the Secretary
US Consumer Product Safety Commission
4330 East West Highway
Bethesda, Maryland 20814

RE: Section 101 Request for Exemption from 100 ppm Lead Content

The Commission was not able to determine that 100 ppm total lead content is not technologically feasible, as staff found that materials containing less than 100 ppm total lead content ***are commercially available in the marketplace for manufacturers.***

The above statement is taken directly from the CPSC Release #11-278, dated July 15, 2011. The above statement severely crippled our farm toy business on August 14, 2011. This is our story:

We are an American-made, Iowa-based company with a 33-year reputation manufacturing farm toys. Our niche market is ride-on pedal tractors, sized for children ages 3-10. We sell nostalgia; with many products sold to parents and grandparents with rural American roots. Our pedal tractors are purchased specifically for their children, grandchildren or for display purposes for adult collectors.

Our tooling and equipment (investments > $10,000,000) is designed to create aluminum die-castings from A380.1 alloy. Aluminum alloys are derived from recycled scrap metal to create ingots; ingots with lead content that is certified per heat but often greater than 100 ppm. Alloyed metal is based off the quality of the scrap it is derived from. Alloyed metal is not a homogenous product, and never will be.

We are a small manufacturer with 2011 sales around $1,000,000. The restrictions and penalties imposed by CPSC are not a risk we are financially willing to take. We do not employ attorneys or scientists. It breaks our corporate heart to exit the farm toy business, a business our founder, Joe Ertl, has participated in for the past 65 years. Yet, it is not worth the continued risk, imposed by our government, unless we are granted a permanent waiver from the CPSC.

Therefore, please accept and approve our submission to the *Section 101 Request for Exemption from 100 ppm Lead Content.* It is our hope that our request will be granted.

Thank you.

Sincerely,

Jane Ertl

Jane Ertl
Executive Vice President
563/875-2436, x226

Five copies enclosed

CASE IH AGRICULTURE

1 ATTACHMENT

Pedal Tractors and Trailers

NEW

ZSM1122
International 660

ZSM1127
Red Grain Cart
(sold separately)

ZSM1095
Farmall M

ZSM1073
Pink Trailer
(sold separately)

ZSM1094
Farmall Pink M

ZSM1023
Red Trailer
(sold separately)

ZSM1121
Farmall 756

1/8 Die Cast Tractor

ZSM1069
1/8 International 966

Sandbox TOYS

ZSM1054
1/16 Farmall 706

ZSM1103
1/16 Red Bale Mover with Bales
(sold separately)

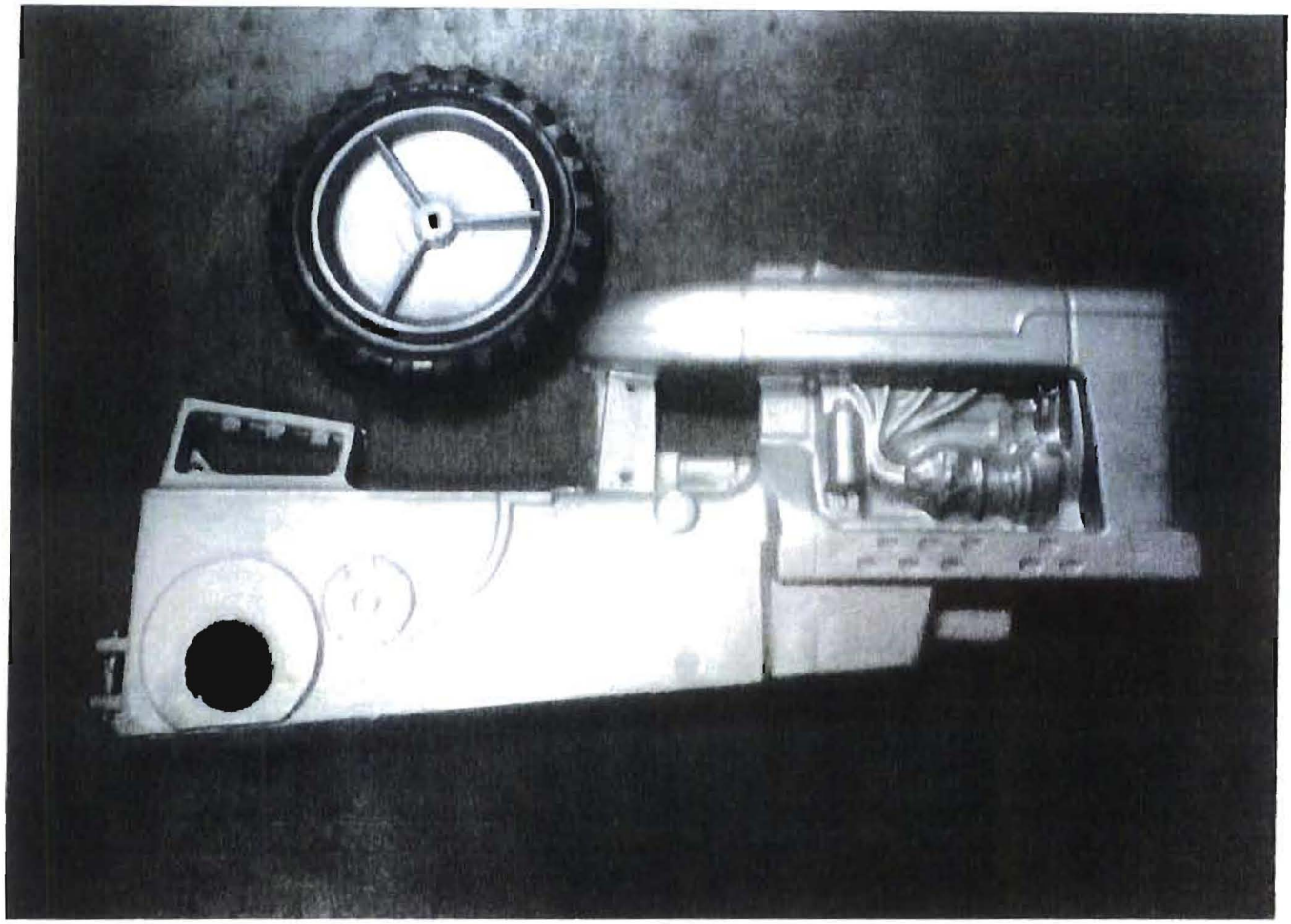
ZSM896
1/16 Farmall M

Made in the USA

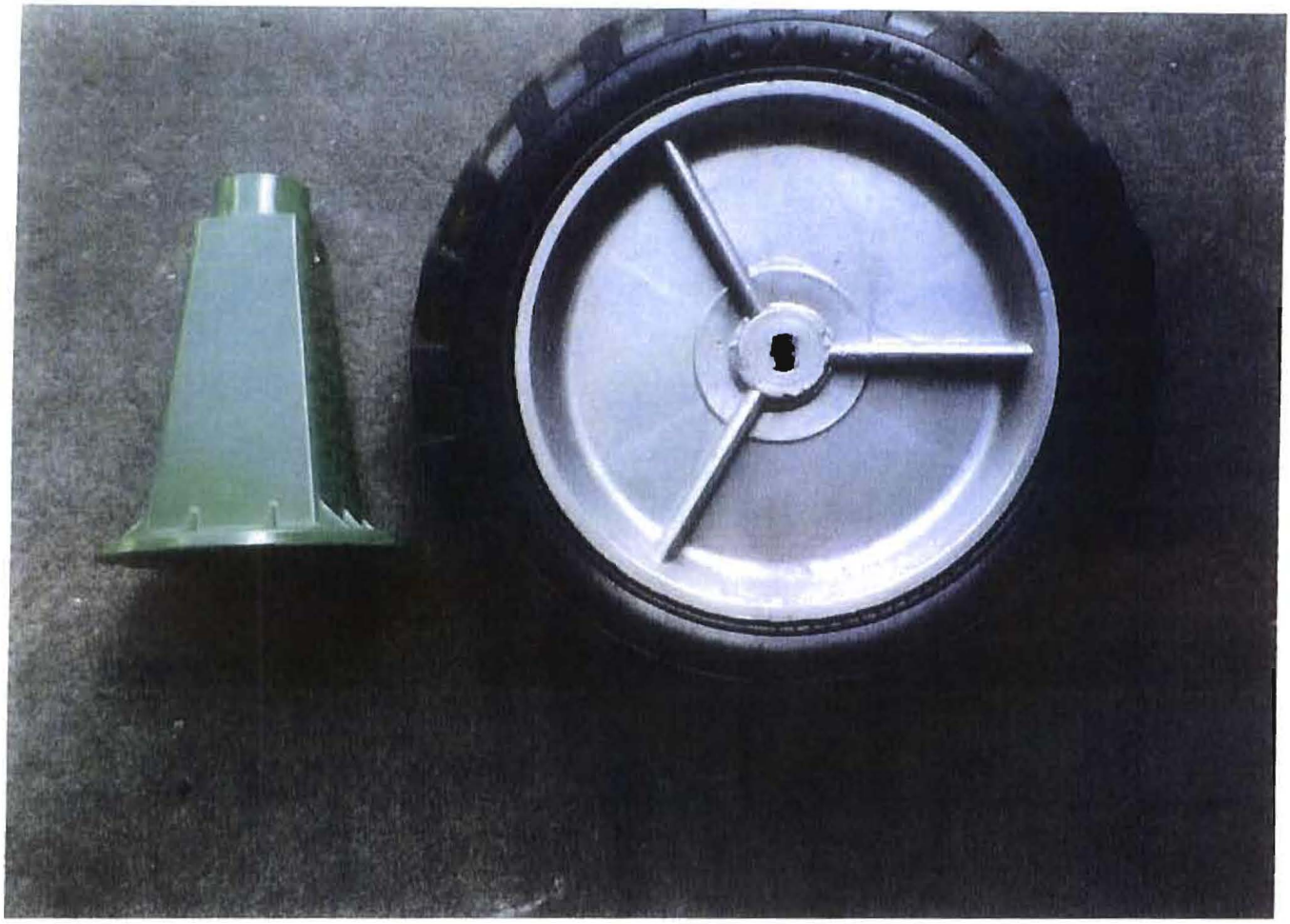
LICENSED PRODUCT
CNH
CNH America LLC

Manufactured with permission of CNH America LLC.
Case IH and Farmall are registered trademarks of CNH America LLC.

Toys are manufactured in the USA.
Due to possible changes in specifications, Scale Models reserves the right to change products and details without notice.



2
ATTACHMENT



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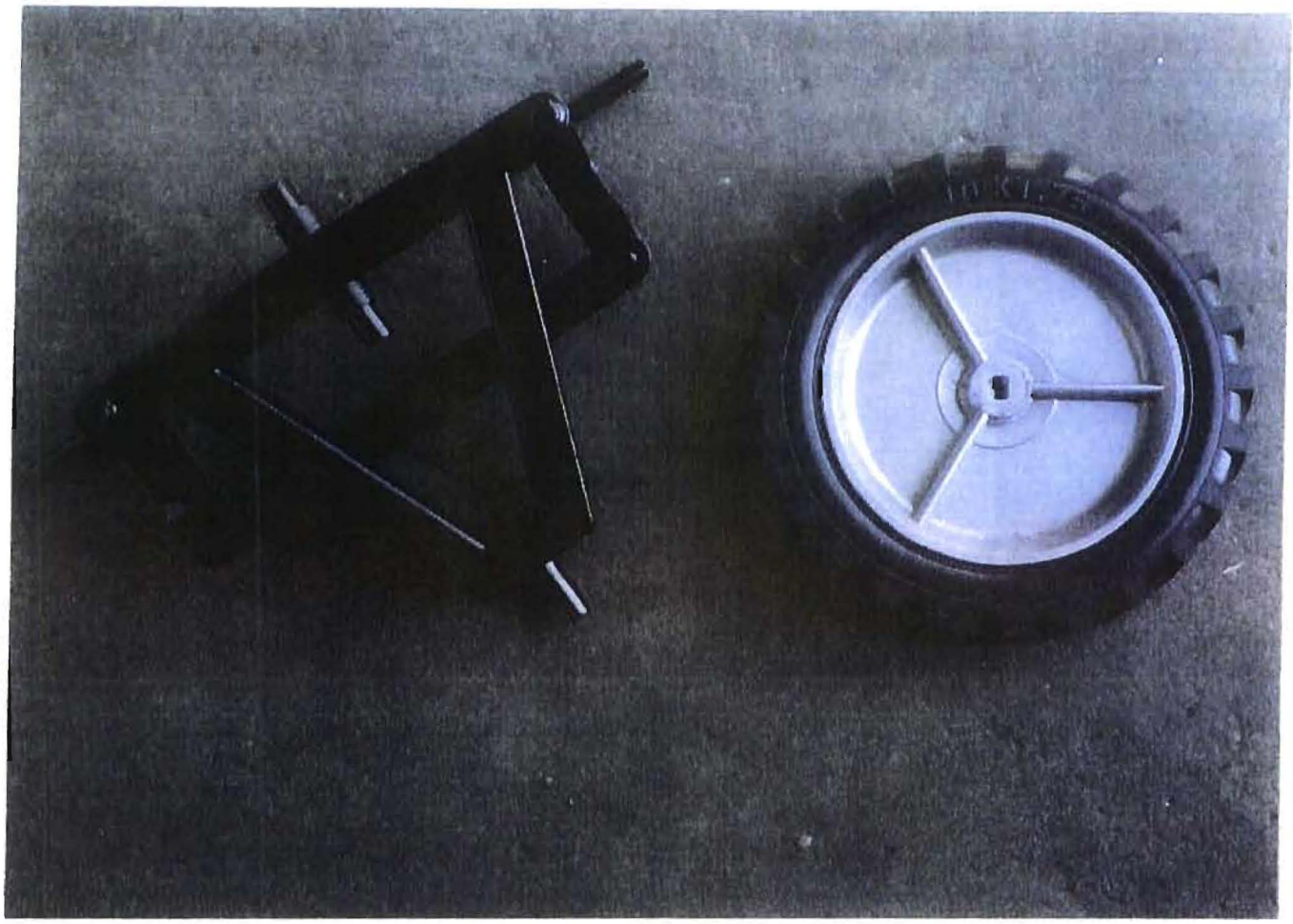

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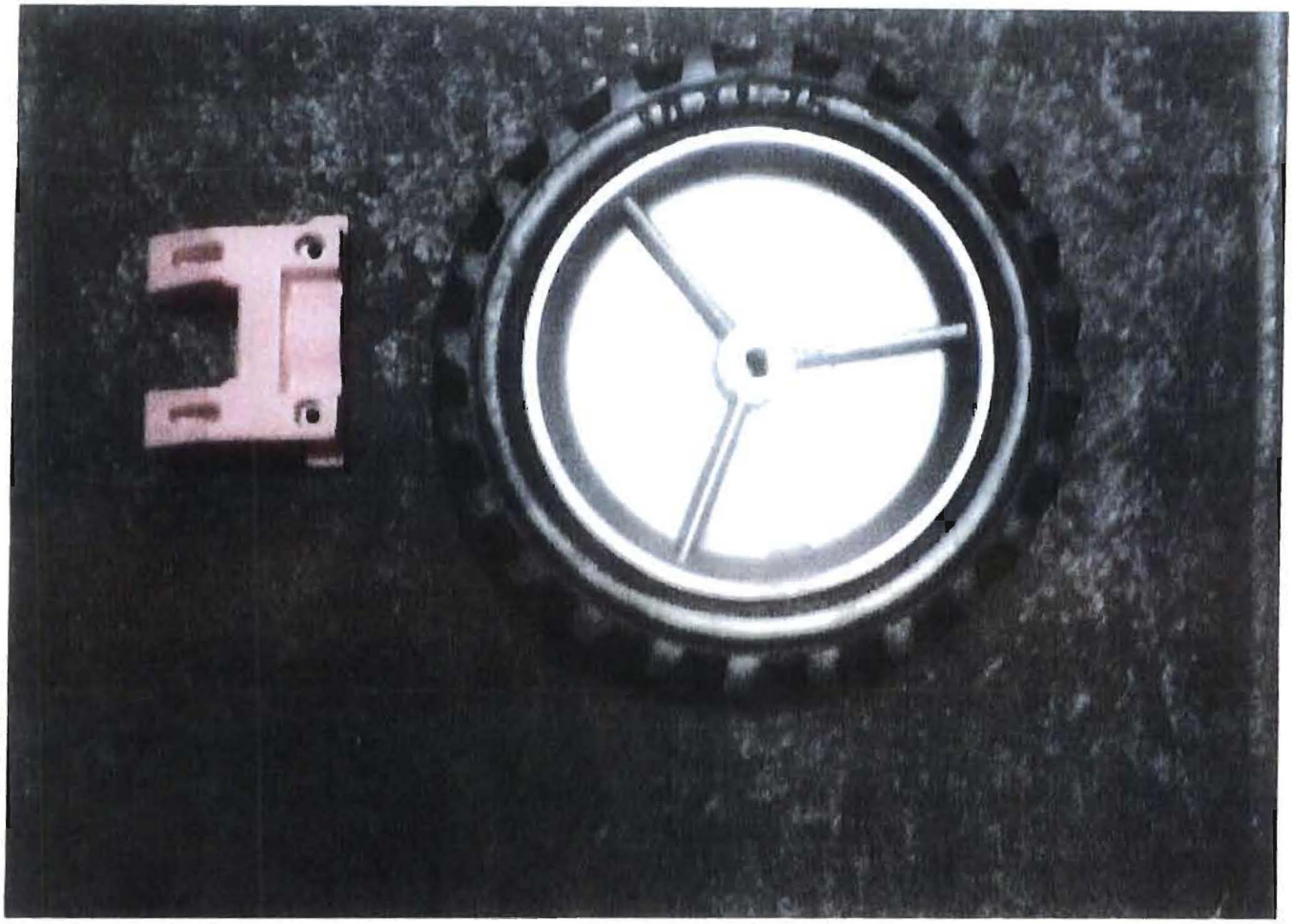


5
ATTACHMENT

6
ATTACHMENT

Allied Metal Company

4528 West Division St. Chicago, Illinois 60651 773/772-0700 Fax 773/772-2030

Allied Metal Process Control

Description: A380.1 ALUMINUM INGOT

Heat Number: 09301-11

SAMPLE	SI	FE	CU	MN	MG	CR	NI	ZN	TI	PB	SN	BETA
1	9.06	0.89	3.13	0.23	0.05	0.06	0.08	2.69	0.03	0.06	0.03	1.53
2	9.02	0.89	3.19	0.23	0.05	0.06	0.08	2.69	0.03	0.06	0.03	1.53
3	9.05	0.91	3.15	0.23	0.05	0.06	0.08	2.71	0.03	0.06	0.03	1.55
4	9.00	0.89	3.13	0.23	0.05	0.06	0.08	2.71	0.03	0.06	0.03	1.53
5	9.14	0.90	3.09	0.23	0.05	0.06	0.08	2.71	0.03	0.06	0.03	1.54
Average	9.05	0.90	3.14	0.23	0.05	0.06	0.08	2.70	0.03	0.06	0.03	1.54
Minimum	9.00	0.89	3.09	0.23	0.05	0.06	0.08	2.69	0.03	0.06	0.03	1.53
Maximum	9.14	0.91	3.19	0.23	0.05	0.06	0.08	2.71	0.03	0.06	0.03	1.55
Std. Dev.	0.05	0.01	0.04	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.01

Allied Metal Company

4528 West Division St. Chicago, Illinois 60651 773/772-0700 Fax 773/772-2030

Certified Analysis

TO:

Date Shipped:

Product in Spec.
KF 9-12-11

Brand Name: Allied Metal Company

Production Date: 09/01/2011

Alloy: A380.1 ALUMINUM INGOT

Heat Number: 09301-11

SI	FE	CU	MN	MG	CR	NI	ZN	TI	PB	SN	LI	BETA	AL
9.05	0.90	3.14	0.23	0.05	0.06	0.08	2.70	0.03	0.06	0.03	0.00	1.54	Bal.

Authorized By

7
ATTACHMENT

Jane Ertl

From: Jane Ertl
Sent: Monday, September 19, 2011 11:19 AM
To: Joe Ertl
Subject: FW: Metal analysis help needed

From: Don Dulkoski [mailto:ddulkoski@alliedmetalcompany.com]
Sent: Monday, September 19, 2011 10:04 AM
To: Jane Ertl
Subject: RE: Metal analysis help needed

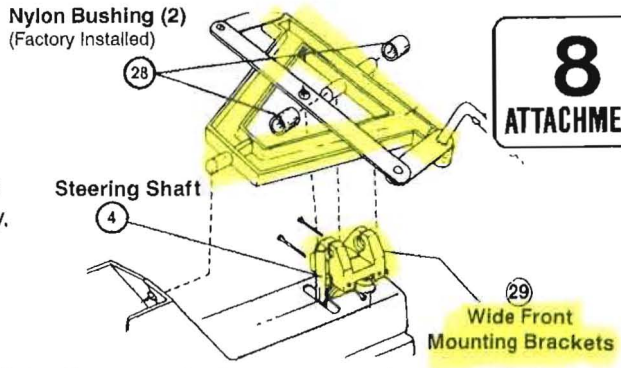
Jane,

I will provide *our* written data which I continue to stand by all along: If you want to continue using an A380.1 secondary aluminum alloy, the content of lead can only be as low as .03% = <300/PPM. *This can only be achieved by luck/happenstance. Lead is inherent (as a trace alloy) in all of the scrap metal we buy to produce our alloys. I could send you years worth of A380.1 aluminum analysis, and we have never had a heat below .03%. When we do produce a heat that low, we put it to the side for your use.

Regards,

Don Dulkoski
Allied Metal Company
Director Aluminum Sales
312-225-2800

Step 6 (If your tractor is a Narrow Front Axle model, skip this step). Loosen the screws in the **Wide Front Mounting Brackets** as needed to insert the wide front axle assembly. Insert axle assembly with rear pivot pin into mounting hole in body. Trap front pin with bushings between mounting brackets making sure steering shaft is inserted in hole in center of tie rod. Tighten bracket screws securely.



Step 7 Turn tractor upright. Slide the 7/16 I.D. washer onto the front axle, then the **Front Wheel.** Using a pliers to hold the push cap (see diagram below), tap into place. Repeat on the other side. Note: If your tractor has power assist wheels, V-tread pattern faces forward. (Mount the Narrow Front wheels in the same manner as the Wide Front wheels).

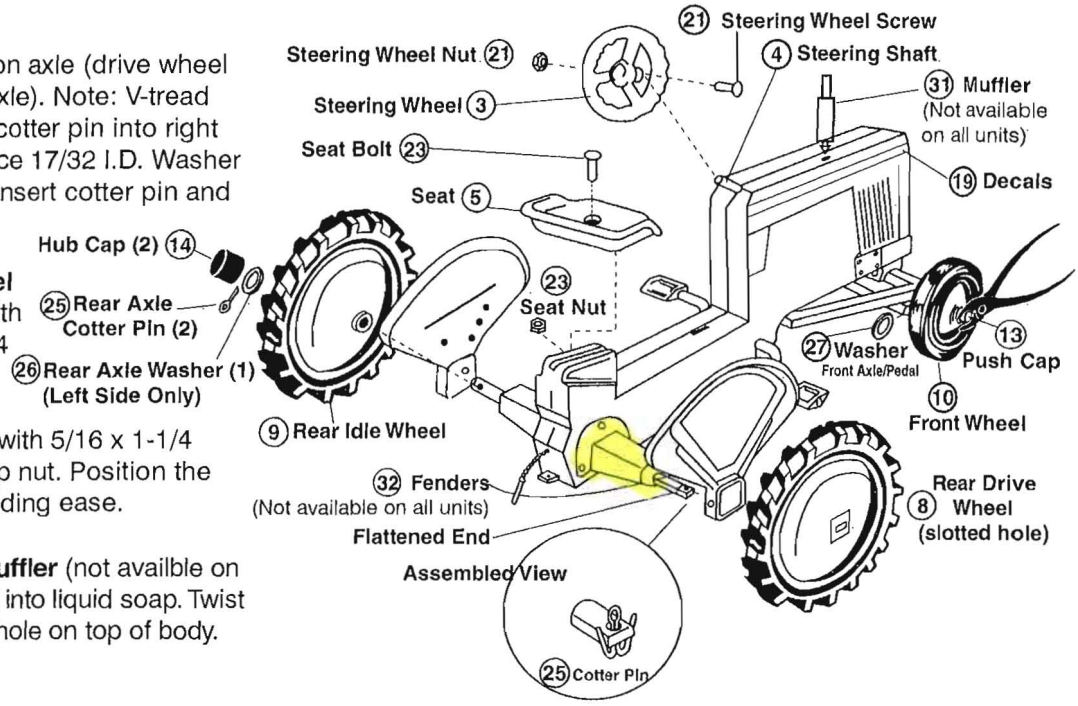
Step 8 If your tractor has **Fenders** (not available on all models), slide **Fender** onto rear hub and tap into place to align holes in hub and fender. Attach with a #8 x 1/2 Type AB Pan Head metal screw. Repeat on other side.

Step 9 Place **Rear Wheels** on axle (drive wheel goes on right flattened end axle). Note: V-tread pattern faces forward. Insert cotter pin into right axle and bend as shown. Place 17/32 I.D. Washer on outside of left idle wheel. Insert cotter pin and bend. Tap on hub caps.

Step 10 Push **Steering Wheel** onto steering shaft, secure with 10-24 x 1-1/4 screw and 10-24 hex kep nut.

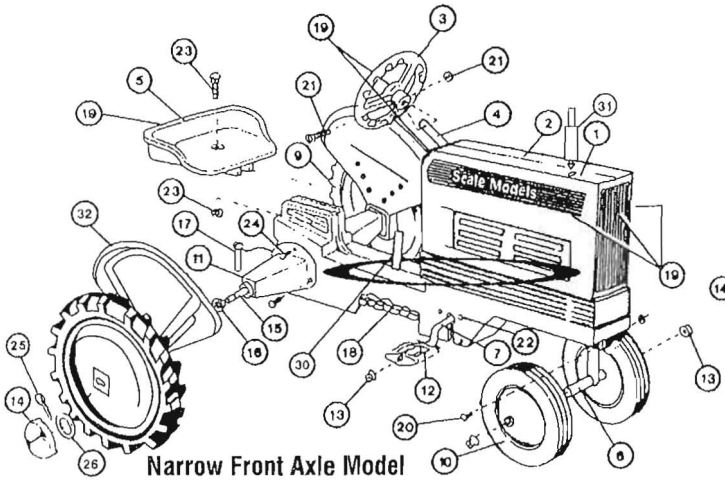
Step 11 Attach **Seat** to body with 5/16 x 1-1/4 carriage bolt and 5/16 hex kep nut. Position the seat to best suit your child's riding ease.

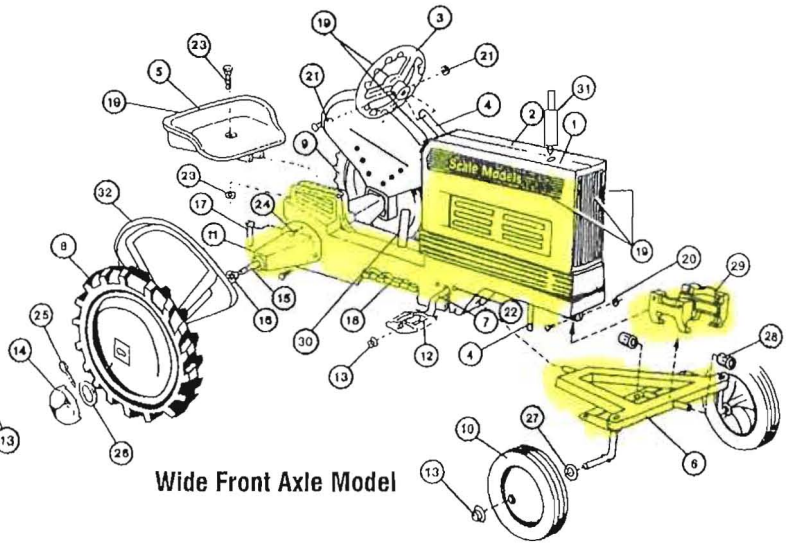
Step 12 If your tractor has a **Muffler** (not availble on all models), dip the bottom end into liquid soap. Twist muffler as you press it into the hole on top of body. Remove excess soap.



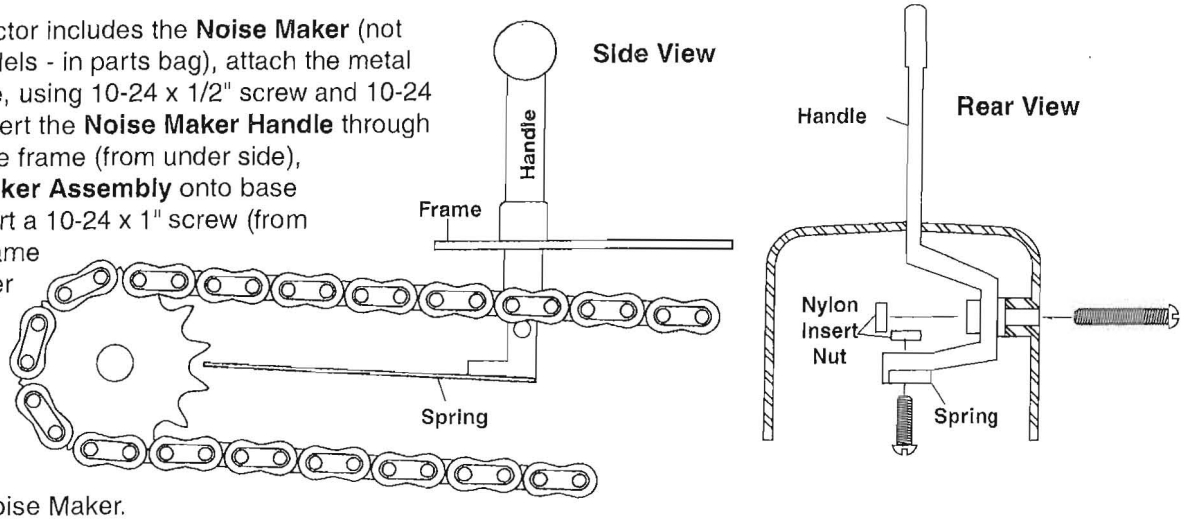
Step 13 Apply **Decals** and make sure all nuts and bolts are securely tightened. Your child is now ready to enjoy this new pedal tractor.

DECALS ARE LOCATED IN BODY CAVITY

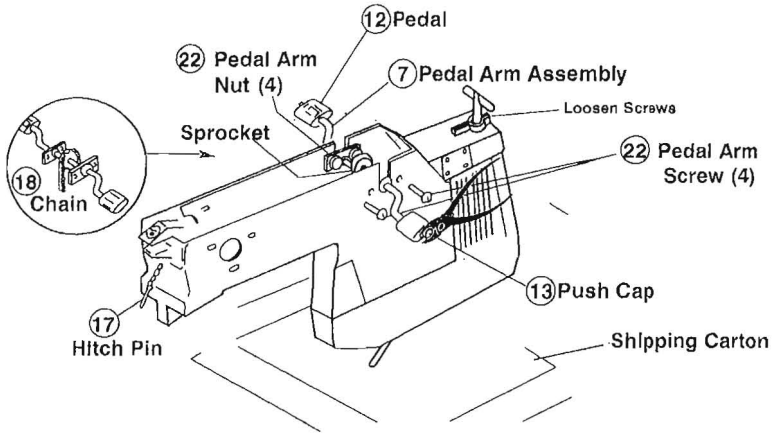




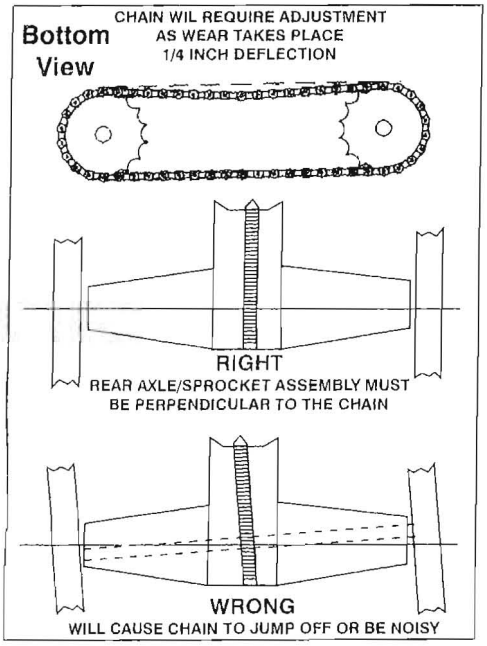
Step 2 If your tractor includes the **Noise Maker** (not available on all models - in parts bag), attach the metal spring to the handle, using 10-24 x 1/2" screw and 10-24 nylon insert nut. Insert the **Noise Maker Handle** through the slot on top of the frame (from under side), Slide **the Noise Maker Assembly** onto base on right frame. Insert a 10-24 x 1" screw (from outside) through frame and the Noise Maker Assembly. Tighten with a 10-24 nylon insert nut. Do not over tighten - the Handle needs to move, to engage or disengage the Noise Maker.



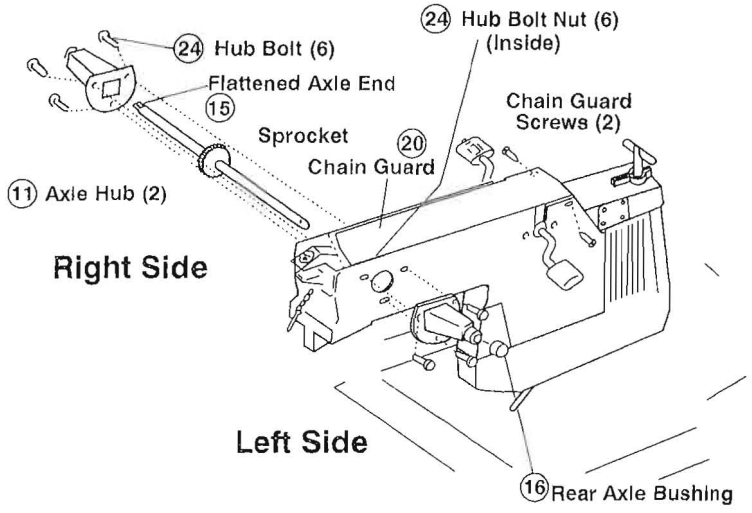
Step 3 Place **Chain** over **Pedal Arm Sprocket** then place arm into slots. Push each nylon bearing into bearing seat inside cycle body. Insert (4) 10-24 x 1 screws through the body and mounting brackets on pedal arm assembly. Using 10-24 hex kep nuts, secure assembly to the body (DO NOT over tighten the screws). Place 7/16 I.D. flat washer, then pedal (flat edge to washer) on pedal arm. Using a pliers to hold the push cap, tap it onto the end of pedal arm. Repeat on other side.



Step 4 Insert **Rear Axle** through holes in rear of tractor, positioning chain on sprocket as you insert axle into body (flattened end of the shaft projects out the right side of the body). Place axle hubs onto axle and fasten with (6) 1/4-20x3/4 bolts and 1/4-20 hex kep nuts. Slide bushings over axle ends into hubs, centering sprocket in cycle body. Pull back on axle to reduce any chain slack and tighten bolts. Do not pull too tight as this will make pedaling hard for your child. Apply a small amount of oil (not supplied) to each sprocket and chain. This should be done once a month to increase the life of the parts.



Step 5 If your tractor includes the **Chain Guard** (not available on all models), insert the **Chain Guard** into the body casting (**U** shape to inside of tractor, flat side to outside) on the bottom side, near the rear. Secure with (2) #8 x 1/2" sheet metal screws at front.



CC-0001

MATERIAL SAFETY DATA SHEET

PRS820075
01 00

9 ATTACHMENT

Section 1 -- PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NUMBER

PRS820075

HMIS CODES

Health	2*
Flammability	1
Reactivity	0

PRODUCT NAME

RED BARON CC-0001

MANUFACTURER'S NAME

THE SHERWIN-WILLIAMS COMPANY
101 Prospect Avenue N.W.
Cleveland, OH 44115

EMERGENCY TELEPHONE NO.
(216) 566-2917

DATE OF PREPARATION
21-JUL-04

INFORMATION TELEPHONE NO.
(216) 566-2902

Section 2 -- COMPOSITION/INFORMATION ON INGREDIENTS

% by WT	CAS No.	INGREDIENT	UNITS	VAPOR PRESSURE
4	2451-62-9	1,3,5-Trigylcidyl Isocyanurate		
		ACGIH TLV	0.05 mg/m3	
		OSHA PEL	Not Available	
30	7727-43-7	Barium Sulfate		
		ACGIH TLV	10 mg/m3 as Dust	
		OSHA PEL	10 mg/m3 Total Dust	
		OSHA PEL	5 mg/m3 Respirable Fraction	
1	13463-67-7	Titanium Dioxide		
		ACGIH TLV	10 mg/m3 as Dust	
		OSHA PEL	*10 mg/m3 Total Dust	
		OSHA PEL	5 mg/m3 Respirable Fraction	

Section 3 -- HAZARDS IDENTIFICATION

ROUTES OF EXPOSURE

INHALATION of dust.
EYE or SKIN contact with the product or dust.

EFFECTS OF OVEREXPOSURE

EYES: Irritation.
SKIN: Prolonged or repeated exposure may cause irritation.
INHALATION: Irritation of the upper respiratory system.

SIGNS AND SYMPTOMS OF OVEREXPOSURE

Redness and itching or burning sensation may indicate eye or excessive skin exposure.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE

May cause allergic skin reaction in susceptible persons or skin sensitization.

CANCER INFORMATION

For complete discussion of toxicology data refer to Section 11.

Continued on page 2

10
ATTACHMENT

JOSEPH L ERTL, INC
QUALITY SYSTEM WORK INSTRUCTION

Alloy Verification Process for Die Casting

Instruction No.: WIDC-10

Copy No.:

	Page No.: 1 of 3
Revision Level: 00	Date: September 9, 2009
Issued by:	Approved by:

Uncontrolled copies are stamped in red "Uncontrolled Document" on each page. Uncontrolled copies of the Quality Manual, Quality System Procedures and Work Instructions are released upon the authority of the Management Representative for commercial and training purposes only.

1.0 PURPOSE:

The purpose for this work instruction is to monitor the alloy composition of materials used though Dyersville Die Cast/Scale Models casting operations.

2.0 RESPONSIBILITY:

It is the responsibility of the Quality Assurance department along with the Diecast managers and supervisors to see that this work instruction is carried out as detailed in the following instructions.

3.0 INSTRUCTIONS:

All appropriate furnaces shall be tested at the beginning of each shift.

Die Cast Furnaces

3.1 Daily ingot samples are to be pulled from each furnace by the Diecast Manager and/or designated personnel.

3.2 These samples are to be verified by the quality department using the spectrometer.

3.3 These samples shall be verified to be in compliance with customer requirements and the supplier's material certifications.

3.4 Hard copies of these test results shall be maintained by the quality department.

Aluminum Die-Cast Pedal Tractors

3.5 During production of Aluminum pedal tractors and or components, the Die-cast manager or designated personnel are to pull an ingot from the appropriate metal furnace.

3.6 These samples are to be verified by a representative from the quality department using the spectrometer.

3.7 The results of these tests are to be incompliance with the appropriate Alloy Specifications for pedal tractors and primarily the Total Lead limit of 300 PPM, per Section 101 of the Consumer Product Safety Improvement Act (CPSIA).

3.8 Test results from these production runs shall be maintained by the quality department.

3.9 Pedal tractor bodies produced after August 14, 2009 will contain as cast, yearly and monthly date code identifiers.

3.10 Pedal tractor bodies produced prior to the August 14, 2009 deadline shall be "grandfathered" in to lead limit requirements set forth by the CPSIA August 14th guidelines.

3.11 Chemical analysis will be compared to the appropriate standard for compliance. If acceptable, reports will be filed and appropriate personnel will be contacted.

3.12 In the event that the test results do not comply with specified requirements the appropriate department managers shall be contacted for remediation and corrective action.

Traceability

3.13 Date code stamps representing the year and month of casting fabrication shall be present on the inside body of the pedal tractors for traceability.

4.0 REFERENCES

11
ATTACHMENT

Sample [redacted]
Alloy : 413 Mode :PA 15-Aug-1991 Time 14:14

Burn 1

Al*R	37391	Si	11.037	Fe	1.001	Cu	0.247	Mn	0.248
Mg	0.026	Ni	0.050	Zn	0.202	Ti	0.071	Sn	0.000
Pb	0.002	Cd	< 0.000	Cr	0.016				

Burn 2

Al*R	43179	Si	11.457	Fe	0.899	Cu	0.236	Mn	0.249
Mg	0.029	Ni	0.052	Zn	0.201	Ti	0.064	Sn	0.000
Pb	0.002	Cd	< 0.000	Cr	0.017				

Burn 3

Al*R	42602	Si	11.129	Fe	0.913	Cu	0.238	Mn	0.237
Mg	0.028	Ni	0.051	Zn	0.206	Ti	0.067	Sn	0.000
Pb	0.002	Cd	< 0.000	Cr	0.016				

Average

Al*R	41057	Si	11.208	Fe	0.938	Cu	0.240	Mn	0.245
Mg	0.027	Ni	0.051	Zn	0.203	Ti	0.067	Sn	0.000
Pb	0.002	Cd	< 0.000	Cr	0.016				

Joseph L. Ertl Inc.
Die Casting/Trim Operation Process Sheet

Customer: Scale models	Part Number: DB-0191	Part Name: Pedal, AGCO DTB/MF Left body

Specifications approved by: Dean Johnson 05-29-09

Document 3 part per shift in "In Process inspection " column

Specifications:	1st pc Approval	In Process inspections ("Pass" or "Fail")					
Alloy: 380(Blue) or 383	413	413	413				
No cold Flow	pass	p	p	p			
No poor fill	pass	p	p	p			
No blistering	pass	p	p	p			
No excessive gate breakout	pass	p	p	p			
No bent or broken core pins	pass	p	p	p			
No pins pushing	pass	p	p	p			
				p			
Approved by: Capital							
Date: 08-08-2014							
Date:		8/8	8/8				
Operator:		JDG	JDG				

Special Instructions:
An approved sample is required before running production. Keep the trim press lubricated every time. Make sure all paper work is filled out accordingly.
Any questions contact your supervisor,
See Sample part

12 ATTACHMENT

E:R: ElementalResearch
4601 Devonshire Road
Harrisburg, PA 17109
Phone 717-540-0212
Fax 717-540-0612
ElementalResearchLab.com

Accredited ISO/IEC 17025

Scale Model Toys	Project: Ford 8N Wide Front Pedal Tractor	**Reported:**
Box 327 301 5th NW.	Project Number: CPSIA	05/29/09 17:35
Dyersville IA, 52040	Project Manager: Steve Vonhandorf	

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
Aluminum Body (BC-0003 #383)	9000066-01	Metal	03/20/09 00:00	03/20/09 16:52
Crank (1018 Mild Steel)	9000066-02	Metal	03/20/09 00:00	03/20/09 16:52
Push Caps	9000066-03	Metal	03/20/09 00:00	03/20/09 16:52
Rear Hub Caps	9000066-04	Metal	03/20/09 00:00	03/20/09 16:52
Rear Steel Wheel (1018 Mild Steel)	9000066-05	Metal	03/20/09 00:00	03/20/09 16:52
Red Paint (Powder CC-0001 Red Baron)	9000066-06	Paint/Surface Coatings	03/20/09 00:00	03/20/09 16:52
Grey Paint Body (CB-0111 LIQ PNT 2 PART Ford Grey)	9000066-07	Paint/Surface Coatings	03/20/09 00:00	03/20/09 16:52
Grey Paint Steel Wheel (CC-0075 Killark Grey)	9000066-08	Paint/Surface Coatings	03/20/09 00:00	03/20/09 16:52
Black Paint Crank (CC-0007 Powder Black LC Smooth)	9000066-09	Paint/Surface Coatings	03/20/09 00:00	03/20/09 16:52
Nylon Bushings	9000066-10	Substrate	03/20/09 00:00	03/20/09 16:52
Seat (PP PROFAX 8523 BE-0019)	9000066-11	Substrate	03/20/09 00:00	03/20/09 16:52
Steering Wheel (PP PROFAX 8523 BE-0019)	9000066-12	Substrate	03/20/09 00:00	03/20/09 16:52
Fender (PP PROFAX 8523 BE-0019)	9000066-13	Substrate	03/20/09 00:00	03/20/09 16:52
Front Rim Silver (PP PROFAX 7523 BE-0029)	9000066-14	Substrate	03/20/09 00:00	03/20/09 16:52
7in Front Tire (Carlisle)	9000066-15	Substrate	03/20/09 00:00	03/20/09 16:52
12in Back Tire (Carlisle)	9000066-16	Substrate	03/20/09 00:00	03/20/09 16:52
Pedal	9000066-17	Substrate	03/20/09 00:00	03/20/09 16:52

Elemental Research, LLC

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Jerry Davies, Laboratory Supervisor

E:R: Elemental Research
4601 Devonshire Road
Harrisburg, PA 17109
Phone 717-540-0212
Fax 717-540-0612
ElementalResearchLab.com

Accredited
ISO/IEC 17025

Scale Model Toys	Project: Ford 8N Wide Front Pedal Tractor	**Reported:**
Box 327 301 5th NW.	Project Number: CPSIA	05/29/09 17:35
Dyersville IA, 52040	Project Manager: Steve Vonhandorf	

Analysis Summary

1.) The tested samples contained in this report MEET THE REQUIREMENTS of 16 CFR 1303 for total lead content in paint/surface coatings.

2.) The following samples contained in this report MEET THE REQUIREMENTS of H.R. 4040 Sec. 101 for total lead content: Crank, Push Caps, Rear Hub Caps, and Rear Steel Wheel.

3.) The Aluminum Body BC-0003 #383 (9000066-01) DOES NOT MEET THE REQUIREMENTS of H.R. 4040 Sec. 101 for total lead content. The total lead concentration of this sample was 625 ppm. Two duplicate samples were analyzed for conformation and were identified as 9000066-01RE1 and 9000066-01RE2. The total lead concentration of 9000066-01RE1 was 620 ppm and 9000066-01RE2 was 603 ppm.

4.) The tested samples contained in this report MEET THE REQUIREMENTS of H.R. 4040 Sect.108 for regulated phthalates content.

Project Notes

A Chain of Custody was not submitted for this project. A sample component spreadsheet was provided by the client.

STORK®
Materials Technology

Stork Twin City Testing Corporation

Material Testing · Non-Destructive Testing
Product Evaluation · Construction Materials

662 Cromwell Avenue
St. Paul, MN 55114
USA

Telephone : (651) 645-3601
Telefax : (651) 659-7348
Website : www.storktct.com

13 ATTACHMENT

DATE: September 27, 2010

PROJECT NUMBER: TCT004438P **PAGE:** 1 of 4

CHEMICAL ANALYSES OF ALUMINUM SAMPLES

Prepared for:

Ertl Scale Model Toys
301 Fifth Street
Dyersville, IA 52040
Attn: Mr. Joseph Ertl

Project: Lead Content

Purchase Order Number: Prepaid

Prepared By:

Daniel Olson

Daniel Olson
Chemist
Materials Testing & Analysis Dept.

651-659-7512
651-659-7348 (fax)

Reviewed By:

Nancy Whaley

Nancy Whaley
Chemist
Materials Testing & Analysis Dept.

The test results contained in this report pertain only to the samples submitted for analysis and not necessarily to all similar products.

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INTRODUCTION

This report presents the result of the analyses of five aluminum samples received by this laboratory on September 8, 2010. The scope of our work consisted of analyzing the samples for total lead to verify compliance to the Consumer Product Safety Information Act of 2008 as requested by Mr. Joe Ertl.

SUMMARY

Based on our analyses, all five aluminum samples complied with the total lead criteria required by the CPSIA. The Combine sample, however, contained lead at the maximum allowable limit.

SAMPLE IDENTIFICATION

1. Pedal tractor cover	TCT# 4438-1
2. Boomer	TCT# 4438-2
3. Combine	TCT# 4438-3
4. NH-TG	TCT# 4438-4
5. Zinc-OL-1850, 1/16 scale	TCT# 4438-5

TEST METHODS

Drillings were obtained from all five samples. Total lead was determined according to Stork-Twin City Testing Standard Operating Procedure, SOP CHEM-15, "Sample Preparation and Dissolution of Metal Samples for Analysis by Inductively Coupled Plasma (ICP) Spectrometer".

A small coupon was cut from the "Combine" sample then analyzed according to CHEM-10 "Analysis of Metal Samples Using the Thermo Electron ARL Quantris Optical Emission Spectrometry (OES) to verify the lead result from the ICP analysis.

TEST EQUIPMENT

Mettler AE200 analytical balance, SN 31846, calibrated on 7/13/10, annual calibration
Thermo Scientific iCAP 6000, SN 20080505, calibrated before use

REMARKS

The remaining portions of the samples will be held for thirty days from the date of this report then discarded unless other arrangements are made.

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TABLE 1

CHEMICAL ANALYSIS

Sample ID	Total Lead ppm	Maximum Allowable Limit, ppm
Pedal Tractor Cover	<50	300
Boomer	<50	
Combine	300 by ICP 300 by OES	
NH-TG	<50	
Zinc-OL 1/16 scale	<50	

< = less than

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REMARKS (CONT.)

According to Section 102 of the Consumer Product Safety Improvement Act (CPSIA) of 2008, Frequently Asked Questions (FAQ's), the manufacturer, importer, private labeler, etc. (not the test lab) must certify the product and provide documentation of the certification.

According to the CPSC, the certificate of compliance must contain the following information:

1. Identification of the product covered by the certificate.
2. Citation to each CPSC safety regulation to which the product is being certified.
3. Identification of the U.S. importer or domestic manufacturer certifying compliance of the product.
4. Contact information for the individual maintaining records of the test results. Analytical records are archived and maintained under the direction of Stork-Twin City Testing's quality manager according to the Stork-TCT quality manual.
5. Date and place where the product was manufactured.
6. Date and place where the product was tested for compliance. The samples were analyzed between September 13 and 24, 2010.
7. Identification of the third-party laboratory on whose testing the certificate depend. Stork-TCT's CPSC identification number is 1078.

UNITED STATES
CONSUMER PRODUCT SAFETY COMMISSION
4330 EAST WEST HIGHWAY
BETHESDA, MD 20814

14 ATTACHMENT

Memorandum

This document has been electronically approved and signed.

Date:
6/29/2011

TO : The Commission
Todd A. Stevenson

THROUGH: Kenneth R. Hinson, Executive Director
Cheryl A. Falvey, General Counsel

FROM : Marc J. Schoem, Deputy Director, Office of Compliance and Field Operations
Mary F. Toro, Director, Regulatory Enforcement, Office of Compliance and Field Operations
Howard N. Tarnoff, Special Assistant to the Acting Assistant Executive Director, Office of Compliance and Field Operations
John W. Boja, Ph.D., Lead Compliance Officer, Regulatory Enforcement, Office of Compliance and Field Operations

SUBJECT : The Technological Feasibility of Reducing Lead Content to 100 ppm: Compliance Data

I. Introduction

Section 101(a)(2) of the Consumer Product Safety Improvement Act of 2008, (hereinafter referred to as the "Act" or "CPSIA"), Pub. L. 110-314 (August 14, 2008), provides that for products designed or intended primarily for children 12 years old and younger, the total lead content limit by weight in any part of a children's product is limited to 300 parts per million (ppm) 1 year after the date of enactment of the Act (August 14, 2009), and 100 ppm of lead 3 years after the date of enactment of the Act (August 14, 2011), unless the Commission determines that it is not technologically feasible to have this lower limit for a particular product or product category. The Commission may make such a determination only after notice and a hearing and after analyzing the public health protections associated with substantially reducing lead in children's products. If the Commission determines that the 100 ppm lead content limit is not technologically feasible for a product or product category, the Commission shall, by regulation, establish the lowest amount of lead content below 300 ppm that it determines is technologically feasible.

Staff of the Office of Compliance is responsible for enforcing the regulations under the authority of the U.S. Consumer Product Safety Commission (CPSC or Commission). Staff is

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variability expected to occur. Of course, this is also the case with a limit of 300 ppm or any other defined boundary.

Another method that could be employed to reduce the effect of outliers is to reduce the number of outliers. This can be accomplished by reducing the source(s) of variability. The Staff Briefing Package on the Technological Feasibility of 100 ppm Lead states that lead is only present in many materials because it is intentionally added. Thus, with the manufacture of raw metals or plastics, the manufacturer must take care to avoid the addition of lead. However, lead could also be added unintentionally when recycled material that contains lead is introduced into the manufacturing process. This source of lead could be eliminated by no longer using recycled materials in the manufacturing process or by testing the recycled material extensively prior to its addition into the manufacturing process. Each method would have the effect of reducing the amount of potential variability in lead levels and would also beneficially reduce the overall amount of lead within the sample.

C. Reports of Lead Variability Within the Same Sample

The lead content has not only been demonstrated to vary between samples, but it also can vary within the same sample. Recently, a firm submitted a laboratory report to the staff of the Office of Compliance. The report pertained to a test for total lead content in a single piece of aluminum alloy casting that was a component of a larger item Ten different areas of the casting were sampled. Each area sampled was digested in acid, and the total lead content was determined for each area using inductively coupled argon plasma spectrometry. The results of the analysis for total lead content from the 10 areas on the aluminum alloy casting are shown in the table below.

Area	1	2	3	4	5	6	7	8	9	10
Lead (ppm)	119	126	113	98	99	82	94	99	100	102

Here, the existence of a larger sample set (10), reportedly extracted from a single material, makes an analysis of mean and standard deviation relevant. This data set has an average of 103 ppm with a standard deviation of 12.8 ppm, which is 12 percent of the mean. This data represents the compliance dilemma surrounding any regulatory lead limit, impact resistance, or other measurable limit given the fact that the measurements from four areas of the single casting exceeded the proposed 100 ppm limit, and the remaining six areas fell below the 100 ppm limit. Good laboratory practice should include ensuring that a representative aliquot from the entire part is analyzed, as discussed in CPSC Method CPSC-CH-E1001-08.1: "When preparing a sample, the laboratory shall make every effort to assure that the aliquot removed from a component part of a sample is representative of the component to be tested, and is free of contamination."

A firm presented data that also shows lead content variability in material other than metal. A string from a mesh bag that holds dominoes was cut into 10 pieces. Each piece was then digested in acid, and the total lead content for each piece was determined using inductively

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