

## TO RUSSIA WITH LOMBARDS

Terrence Harper  
Feb. 2017

*“Gaston Williams & Wigmore have closed contracts with the Russian government for large shipments of Lombard caterpillar tractors.”*

From July 28<sup>th</sup> 1914 through November 11<sup>th</sup> 1918 Western Europe was engulfed in the darkness of war that would ultimately involve thirty two countries and result in the violent death of approximately 9.5 million souls with another 15 million seriously wounded from Europe alone. “The war to end all wars” all but wiped out an entire generation of British, French and German young men between the ages of 19 and 22. Contributing to this is the fact that the early years of the war witnessed the frequent pitting of 18<sup>th</sup> century tactics against modern 20<sup>th</sup> century technology – i.e. horse mounted Calvary charges against massed machine guns and artillery with horribly predictable results. The casualties inflicted upon the British Calvary at Mons in August 1914 serve as proof of this. Though the use of mounted troops waned quickly for all belligerents horses were still a predominant factor on the field of battle as draft animals.



As tactics and weapons technology evolved so did the need to mechanized armies – the ability to move troops and materials swiftly became paramount. At the beginning of the war horses were the primary means of moving heavy weapons and material. As an example in August of 1914 the British forces had an estimated 25,000 horses on hand. Between 1914 and 1918 the U.S. alone would send an estimated one million horses to Britain and France with the AEF bringing a further 182,000 overseas with them in 1918.<sup>1</sup> During the course of the war it was not unusual for the British to ship over 1,000 horses per day across the Channel to France. With heavy industry barred from producing mechanized transportation by the Allied blockade, horses were of particular importance to the German and Austrian forces as well. In 1914 the Germans mobilized 715,000 horses with the Austrians contributing an additional 600,000.<sup>2</sup> Feeding this vast equine army became a major concern and in fact in some instances impacted strategy and to a lesser extent the outcome of battles.<sup>1</sup>



With the average draft horse consuming between 40 to 50 pounds of feed per day a heavy burden indeed was placed on an already over worked transportation and supply system with many valuable draft animals dying of starvation as opposed to war related wounds and illness.

As the war in Western Europe stagnated into trench warfare and devolved into a horrible war of attrition where success could be measured in yards as opposed to miles, artillery – long reviled by supporters of the swift and heroic Calvary charge as a unwanted burden, soon became a major component of defensive and

offensive strategy. Along with this shift came rapid technological development. Gone were the early days

<sup>1</sup> Singleton, John (May 1993). "Britain's military use of horses 1914–1918". *Past & Present*: 178–204.

<sup>2</sup> Keegan, *The First World War*, p. 73

of the war when artillery crews fired at an enemy or target they could see from their positions and when field pieces were relatively light in weight to promote mobility. With the rapid development of fire control systems which allowed accurate, indirect fire at an unseen target miles away, field pieces grew enormously in size and capability and soon outstripped the ability of being moved about by draft animals. Thus entered the artillery tractor.

Though the British had experimented using tractors to move artillery as far back as the Crimea war (1853-1856)<sup>3</sup> their development was slow and hindered by the existing technology. At the dawn of WW1 a British artillery tractor was no more than a traditional steam powered traction engine limited to developed roads with little to no cross-country capability. As the war advanced more capable tractors such as the crawler tractors produced by Holt Manufacturing in Stockton, California began to arrive from the U.S. With the entry of the United States into the war in April of 1917 and with the might of its massive industry thrown into the effort massive quantities of trucks and tractors began to arrive at French ports. While France and Britain benefitted greatly from the influx of trucks and tractors from the U.S. one country fighting the combined might of the Germans and Austrians did not – Russia.

**RUSSIA'S BIG TRACTOR ORDER.**

The exporting firm of Gaston, Williams & Wigmore has closed contracts with the Russian government for large shipments of Lombard 100 horsepower tractors similar to those used by the British in their military operations. Deliveries of the order will commence in the spring.

“Motor Truck” - The national authority of power haulage,  
February 1917

In 1914 the Imperial Russian army had 1.4 million men at arms making it by far the largest army in the world at the time. Early on this massive army cleaved deep into Prussia. However, perforated by rot from within and suffering from a acute lack of an industrial base to support it, the Russians suffered a humiliating defeat at Tannenberg though against the Austrians they fared better.

Launching a massive offensive against Austro-Hungarian forces in May of 1916, which after tremendous effort ground to a halt in October having gained little. Hamstrung by poor leadership, lack of industry and increasing internal strife it was the last major offensive ever launched by the Imperial Russian army. With no significant automotive industry of its own the Russian government sought to purchase vehicles of all types abroad including Lombard tractors to be used as prime movers for artillery. The first indication of the Russian interest in purchasing heavy tractors was an inquiry that appeared in a trade magazine on December 1, 1916:



Lombard Tractor in Russian Military service 1917-18  
Terence F. Harper Collection

*“Some time ago you have been kind enough to send me a copy of specifications of 1916 commercial gasoline vehicles. I have now an inquiry for some types of vehicles which I do not find in these specifications... Can you perhaps addresses of the factories which make them? Also can you give me names of some good first-class tractors of the caterpillar type and of large horsepower for transmission of heavy cargos”<sup>4</sup>*

*R. Poliakoff, M.E. Moscow.*

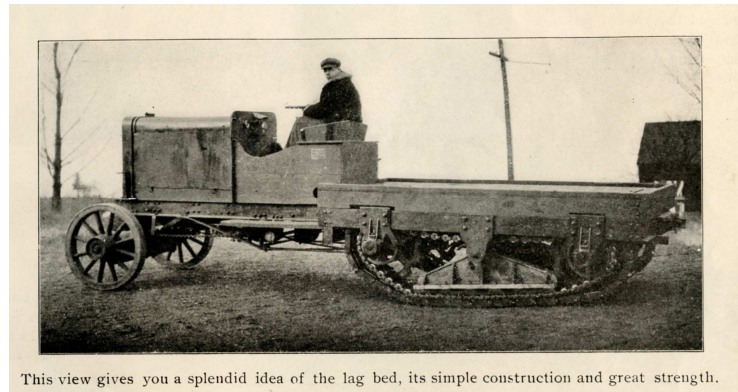
<sup>3</sup> Gray, R.B. (1954). “The Agricultural Tractor, 1855-1950”, p 83

<sup>4</sup> “Commercial Vehicle”, December 1, 1916, p31

At the time Poliakov - a noted production engineer, was living in the United States and was the Managing Trustee<sup>5</sup> for the Russian government in charge of many important purchasing contracts.<sup>6</sup>

This was not the first time Lombard had dealt with a military contract. During Pershing's punitive expedition into Mexico in pursuit of Pancho Villa in 1916, Pershing used to good effect a hodge-podge fleet of trucks and tractors including FWD's, Holt, at least one Phoenix gasoline tractor and at

least two Lombard tractors provided by the Lombard Auto Tractor Truck Corp. of New York which was created in 1915 by James Barron<sup>7</sup> - Lombard's sales agent. Concurrent with this, Barron began assembling Lombard tractors at a facility in Elizabeth, New Jersey and marketing them through the J.S. Barron Corporation. While the results of Pershing's expedition were less than stellar, what it did do is provide valuable experience to the Army in regards to mechanized transportation which would become a decisive factor in the war raging in Europe. At the close of the Mexico adventure the two Lombards were returned to the New Jersey factory for repair and re-sale.<sup>8</sup> Though they performed well, at less cost per ton mile than any other truck or tractor including mules,<sup>9</sup> no sales to the army were forthcoming in spite of one government official stating "if you can make good on the Mexican border, your machine will operate successfully anywhere in the world..."<sup>ibid</sup>



This view gives you a splendid idea of the lag bed, its simple construction and great strength.

Lombard catalog illustration showing track system  
Terence F. Harper Collection



Members of the Foreign Trade Association,  
M. Poliakov standing on far right  
*The Cincinnatiian*, April 23, 1917

Trying to sell tractors to the United States Army prior to its entry into the war proved to be a frustrating process. With a military doctrine rooted deeply in a policy of neutrality, the Army suffered from lack of funding and neglect. With only 110,000 men in 1916, and still heavily reliant on the horse, the number of tractors and trucks could be measured in hundreds as opposed to thousands. Needless to say when the Russian government came calling it was a welcome opportunity for Lombard.

In May 1916 it was reported that "Representatives of the warring governments of Europe are very interested in the Lombard tractor made in Waterville, ME... At a recent demonstration for war buyers a tractor hauled 31 tons six miles an hour on a train of wagons through very deep snow."<sup>10</sup>

Given the events that followed, there is no doubt that a Russian delegation was present during these trials including perhaps R.

Poliakov. They must have been impressed since their agent - Gaston Williams and Wigmore - an export

<sup>5</sup> "Decisions of the War Department, Board of Contract adjustment", Volume VI, 1920, Government Printing office, 1921

<sup>6</sup> Carpenter, Charles Underwood, "Increasing Production, Decreasing Costs" The Engineering Magazine Co., 1920, p209

<sup>7</sup> "Steel and Iron", August 15, 1915

<sup>8</sup> Supreme Court of the State of New York, C.H. & R.C. Peckworth Incorporated against the City Of New York, June 21, 1921

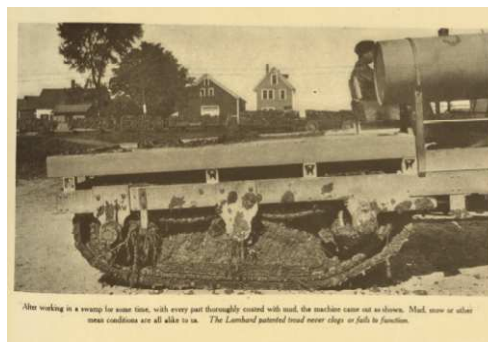
<sup>9</sup> "The Timberman", October 1920, p97

<sup>10</sup> "Motor Truck" - The national authority of power haulage, May 1916



agent with office in New York and Archangle, Russia (among others) had closed the deal by February 17, 1917.<sup>11</sup>

Exactly how many Lombard tractors were sold to the Russian government is unclear. Reports from the time simply state “a large number”<sup>12</sup> while one source lists 104<sup>13</sup> the late Carroll Hamlin, who worked for Lombard from 1919 through 1950, stated that 100 were delivered.<sup>14</sup> Surviving Lombard records list just three: serial numbers 2004, 2018 and 2020 being sold through Lombard’s agent – J.S. Barron Corporation, to the Russian government in early 1917<sup>15</sup> The surviving records are far from complete and we have practically no record of machines produced at Barron’s New Jersey plant where the Russian bound Lombard tractors were assembled.<sup>16</sup>



Lombard catalog illustration showing how track system performs in mud

*Terence F. Harper Collection*

The records that have survived list the typical Russian contract Lombard as having a Wisconsin type “P” motor with a bore of 5-3/4 inches and stroke of 7 inches which equals a displacement of 1,090 cubic inches and rated at 90 horsepower at 800 rpm. Lombard marketed these tractors as 100 hp machines.<sup>17</sup> The price listed for the tractor bearing serial number 2020 was \$4,840.00. This was a bargain indeed given that from April 1917 the United States was swiftly moving to a war footing. As the United States involvement in the war accelerated so did the cost of trucks and tractors as more and manufacturing capacity turned from meeting civilian needs to that of the military. As an example, at inflated war time prices, the list price for a new Lombard tractor was \$9,474.00 in 1918.<sup>9</sup>

Since it appears that records are all but non-existent there wartime history is rather vague. However, that they arrived in time to see frontline service before the complete collapse of the Russian armies and the Czar is not in question. Based on the surviving evidence it appears that their primary role was hauling heavy artillery – a role that they were well suited for – being fast (relevant to the other tractors of the day) powerful and easy to operate. In fact they were credited with “saving over 600 big guns” during one of the German offenses.<sup>18</sup> Lombard literature of the day touted the ability to cross rough terrain, ford streams, haul heavy loads up steep slopes and be all but unstoppable in mud and snow. During the war the Russian Lombard tractors routinely pulled loads that included six 3-1/2 ton caissons and a 9 ton gun “through mud up to the hub of the wheels of the caissons as the wheels themselves are 5 ft. high...”<sup>19</sup>



Lombard tractor captured by German forces. Minsk, February, 1918.

<sup>11</sup> “Wall Street Journal”, Feb. 17, 1917

<sup>12</sup> “Motor Truck” - The national authority of power haulage, February 1917

<sup>13</sup> Kelly, Maurice A. “Russian Motor Vehicles: The Czarist Period 1784 to 1917”, Veloce Publishing, 2009

<sup>14</sup> Interview, Carroll Hamlin, “Little Talks” No. 862, October 11, 1970, Colby College Special Collections

<sup>15</sup> Sturtevant, Lawrence M., unpublished manuscript, “Lombards of Maine : inventors from the Penobscot frontier”

<sup>16</sup> Supreme Court of the State of New York, C.H. & R.C. Peckworth Incorporated against the City Of New York, June 21, 1921

<sup>17</sup> Catalog, Wisconsin Motor Manufacturing Co., 1918

<sup>18</sup> Lombard Auto Tractor Truck Corporation, “Special Points of Construction in the 1920 Model Lombard AutoTractor-Truck”, 1920

<sup>19</sup> Highway Transportation, April 1919, p32

In spite of the glowing praise orders placed by the Quarter Master of the United States Army appear to be meager. In May 1918 twenty Lombard tractors, along with a six month supply of spare parts were awaiting embarkation to France as part of the build-up of the AEF.<sup>20</sup> Why Lombard tractors were never used more extensively on the Western Front is unknown. That tractors of various makes (those produced by Holt in particular) were used in large numbers is indisputable. Perhaps it had to do with the roller chain design. Lombards were designed specifically for hauling timber during the winter months. The design was not optimal for work in gritty sand or mud, which lead to rapid wear of the roller chains. Running on snow and ice, a Lombard's tracks, pins and roller chains could have a life extending well over 7,000 miles<sup>21</sup>. However, used in sand, gravel and mud without proper maintenance, they would wear out quickly. One such example was a Lombard tractor purchased new in 1918 and used at Camp Upton, Long Island for three months than transferred to Camp Mills, Long Island where, over the next nine days, it was operated nearly 24 hours around the clock in a sand pit. When returned the track system had to be completely rebuilt.<sup>11</sup> Whether this was the reason or not we simply do not know. Years later, Lombard would develop the 8 ton Model "T", 15 ton CS-88 and 20 ton model GT<sup>22</sup>, with their unique steel bogie system, specifically for use in construction where operating in mud, sand and gravel would be the norm rather than the exception.



Holt tractor captured by German forces. Minsk, February 1918.  
Note Lombard tractor in background  
*Terence F. Harper Collection*

When the German Army occupied Minsk in February of 1918 they found, among the debris left behind by the crumbling Russian army, at least two of the far traveling Lombard tractors whose journey to war, in a far-off land, began so many months before in Elizabeth, New Jersey. While some of the Russian Lombards were no doubt casualties of war at least a few served on – modified into armored cars during the bloody days of the revolution.

As a result of the fall of the Czar and the turmoil of the revolution Gaston, Williams and Wigmore suffered a loss of \$1,751,309.00 which was written off the books in May of 1918. However, profits from exports and shipping to support the war effort not only covered the debt but allowed a surplus of \$23,487.00.<sup>23</sup> In 1920 R. Poliakoff was listed as an assistant professor of Mechanical Technology at the Technical Institute in Moscow. He was at the time a noted Russian authority on factory practices<sup>5</sup> and was marketing the Poliakoff "Universal" rule – a metal ruler marked in such a way as to solve six common math problems associated with machining and grinding, through a New York, New York address<sup>24</sup>.

As for the Lombard Auto Tractor Truck Corporation - in the summer of 1919 a letter was received from the Wisconsin Motor Manufacturing Company asking about a particular engine they had supplied to Lombard and asking to whom and where it had gone. American forces had captured the engine from the Germans in France and where wondering how it had gotten there. That \$79.00 engine<sup>10</sup> marked the closing saga of the Russian Lombard tractors sent to aid a country in need and the last time a Lombard tractor would go to war.

<sup>20</sup> "War Expenditures, Hearing before Sub-committee No. 3 (Foreign Expenditures), Vol. 2, Government Printing Office, 1920, p2388

<sup>21</sup> Vigue, Raymond F, unpublished manuscript, Terence F. Harper Collection

<sup>22</sup> Lombard Tractor and Truck Corporation, "Lombard Tractors Brief of Specifications", Circa 1927

<sup>23</sup> "Automobile Topics", June 15, 1918

<sup>24</sup> "American Machinist", July 7 1921, p35