Australian Government

Department of Communications and the Arts

Protection of Movable Cultural Heritage Act 1986

Significance Assessment Form

Part A

Application number: PMC 2838 - Permanent Export Permit

Object being assessed: IHC Titan Type D Tractor 1911

The object being assessed is a Class B object - 4.4 *Objects in this category are Class B objects for the Act, and include: (a) any agricultural object, including: (vi) any other thing related to agriculture*

Is the object an APO? Yes ☐

An agricultural machine, over 100 years old

Part B

Where the object is an APO

Would the permanent export of this APO significantly diminish the cultural heritage of Australia? NO

The Movable cultural heritage prohibited exports register lists an International Titan tractor, 1912 serial number 2535, with permission to export being denied prior to 2013. The subject tractor was built one year prior to 2535, suggesting it is one of the oldest machines of its type in the country. The oldest international combustion engined tractor in Australia is an English made 1897 Hornsby Ackroyd. While there are two examples of IHC tractors from this period in Australian public collections, both are of smaller types to the subject vehicle. They do however exhibit similar design features and are good examples of the construction methods and overall format of IHC tractors pre WW1. It would be impossible to collect examples of every type and sub-type produced by a large manufactor like International Harvester and it is reasonable to suggest loss of the subject vehicle will not diminish the cultural heritage of Australia.

A longer discussion of these aspects is to be found at Appendix 1, page 7 of this document

Should the object be granted an export permit? **YES**

Would the temporary export of this object significantly diminish the cultural heritage of Australia?
NO ... For the reasons outlined above

I have completed the significance assessment following.

Part C

Significance Assessment Report

Name of object

IHC Titan Type D Tractor 1911

1. **Brief description of the item:**

The IHC Titan is a large tractor of primitive design, typical of the pre-WW1 period. The vehicle shows the transition from the steam traction engine of the 19th century to the modern petrol / diesel tractor of the 20th century.

2. **Type of application applied for:** *Permanent*

3. **How was the object examined?** – photographs

4. Assessment Criteria

4.1 Significance values

- **Historic Significance**: The International Harvester Company was the world's leading tractor manufacturer in the first decdes of the 20th century. The company was able to export its products worldwide and they found particular favour in Australia, which had similar farming conditions to the USA and Canada. The tractors were particularly popular in Western Australia where wheat farming took place on extremely large properties suitable for this type of equipment. The Titan shows the clear transition from the steam traction engine of the 19th cenury to the internal combustion engined tractors of the modern era. Steam power required highly skilled operators and was normally deployed in a stationary position for threshing, or for plowing using a dragline system that was only suitable for relatively small acreages. The introduction of parrafin, petrol and diesel power meant that owner operators could buy and use their own equipment, with one-man operation on even the largest properties. The tractor also shows that, despite tariff encouragement to purchase British made equipment, Australian farmers had a preference for American designs that were better suited to local conditions.

- **Aesthetic Significance**: Such vehicles have a bold, rugged charm that finds great favour with enthusiasts of agricultural and industrial machinery.

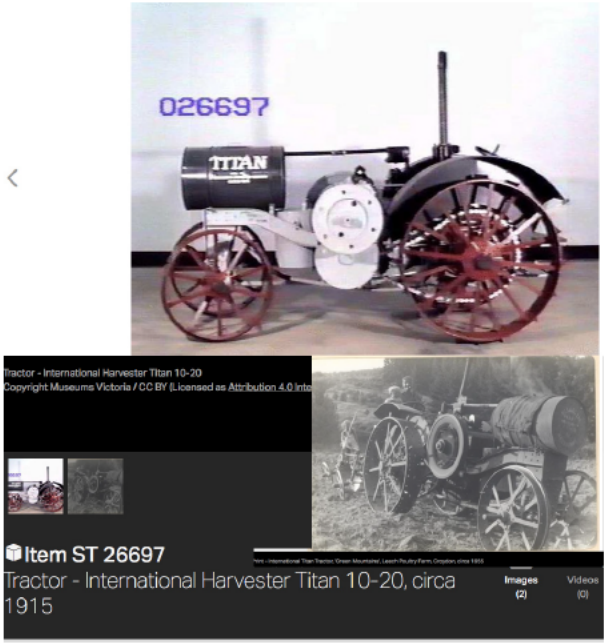
- **Scientific, Technical or Research Significance**: The tractor has considerable technical interest being a very early design in a new area of production. The Titan has a number of elements in common with a small steam traction engine, but it also points toward the modern tractor. The Titan tells us about both the design and means of production of agricultural equipment which began to be produced in large volumes in the years before WW1.

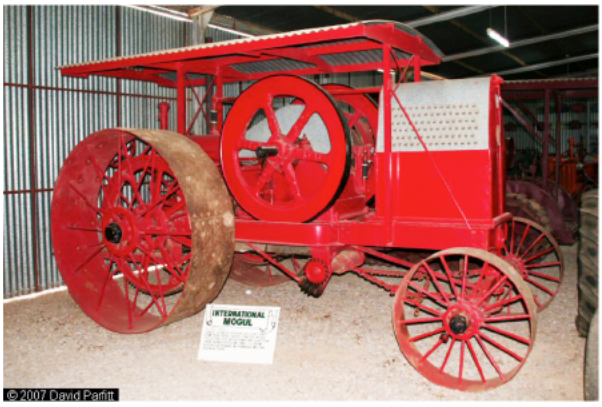
- Social or Spiritual Significance: The Titan tells many stories about the willingness of Australian farmers to adopt new technology, to keep up with the modern developments in farming and their preparedness to invest considerable sums in mechanisation. Such machines were expensive, but allowed for great efficiencies in the farming of large tracts of land.

4.2 Comparative Analysis

- **Provenance** – Limited information provided by the applicant.
- **Representative or rarity**: There are eight tractors of this type in Australia and some 40 listed worldwide. The rapid increase in value of such machines in recent times has meant that are many involved in the active search of rural properties seeking out 'lost' machines. The importance of the IHC brand and the bold, robust design of the Titan have made it popular with collectors.
- **Condition, completeness or intactness**: The tractor appears to be in relatively good complete condition
- **Interpretative potential**: Such vehicles have considerable display and interpretation potential as they tell many stories of our agricultural, technological, economic and trade history.

5. **List details of any other comparable objects:** There are two IHC tractors in Australian public collections, although both are of the smaller variants – a 10-20 Titan at Museum Victoria and a Mogul Type C at Booleroo in South Australia.[below right] These tractors are smaller than the Type D, with the Victorian example being used in orchard work rather than broad acre crop farming. [below left]





Even in a poor quality screen-shot from an online video the sheer scale of the Titan in comparison to the other tractors around it can be clearly seen.

6. **Statement of significance:** The Titan epitomises the technology and production methods employed in the years before WW1. It would have been the best and most desirable equipment of its type for local farmers – simple, powerful and robust and appropriate for Australian broad acre farming conditions.

7. **Significance to Australia:** The Titan has considerable importance to Australia, exemplifying the capability and ambition of our farmers in the first years after Federation. It shows how Australian farmers were ready and able to invest in the best modern equipment at a period of rapid change. This was important at a time when mechanisation was changing the dynamics of agricultural, with fewer unskilled labourers being required to work the land with a commensurate shift of people toward the larger cities. This became especially important after the outbreak of war in 1914 when labour was increasingly hard to get and increased production was crucial to the war effort.

8. **Value of object** $80,000 [applicant]

9. **APO Status** 4.4 Objects in this category are Class B objects for the Act, and include: (a) any agricultural object, including: (vi) any other thing related to agriculture;

10. **References:**

https://www.steel-wheels.net/registerihc.html
https://www.queenslandcountrylife.com.au/story/5462274/meet-the-man-with-one-of-australias-largest-tractor-collections/
http://bundabergauctions.com.au/june-23rd-2018-sale-of-the-century/

s22(1)(a)(ii)

s47F s22(1)(a)(ii)

VERSION APR16

Expert Examiner Contact Details:

Family name: s22(1)(a)(ii) First Name: s22(1)(a)(ii) Title: s22(1)

s22(1)(a)(ii)

CERTIFICATION – I declare that I will not disclose the application details to any other parties; and that in assessing this application I have no known conflict of interest

s22(1)(a)(ii)

Signature of Examiner:

Date: 25 June 2018

Appendix 1

The pressing question with this application rests with the 2004 export ban on another complete IHC Titan, currently privately owned in Western Australia. At present there is insufficient information available to make a close comparison between the two, although according to the small amount of information supplied by the applicant, and that published in relation to its recent sale, the present example might be considered less original than the WA example. Both are examples of the earliest large petrol engined tractors to come to this country, with the subject vehicle being constructed one year before the WA tractor. The oldest known internal combustion engined tractor in Australia is the 1897 Hornsby-Ackroyd oil engined vehicle, currently resident in Tasmania. That vehicle presents more as a traction engine modified to use an oil engine, rather than a 'new' design as with the Titan. While there is no example of the D45 in any public collection, there are two smaller pre-WW1 IHC tractors from the same period, one with Museum Victoria and a Mogul in the collection of the Booleroo Steam & Traction Preservation Society Museum.

The question therefore is have conditions changed significantly in the ensuing fourteen years to change matters sufficiently to allow the export of the subject vehicle? The accumulation of information and the publication of a list numbering eight such vehicles in Australia does suggest that the Titan Type D is less rare than originally thought. The international tractor collector market has boomed in recent years, in parallel with the collector car market that has reached astronomical levels in recent times. The rise in value of old tractors has meant that it is financially worthwhile spending time and effort tracking down derelict vehicles that might remain on outlying properties. Australia has proved to be an important source of vintage agricultural machines. This has come about for a number of reasons. Our climate means that machines do not rust away if left in reasonably dry conditions – this applies especially in the Western Australian wheat belt. Australia did not suffer two major wars on home soil that, in overseas countries, saw large numbers of older machines scrapped to provide resources for industry. This applied particularly in the UK and Europe and now there is a definite push to repatriate such examples as the Lanz Bulldog, a German marque that sold very well in Australia. Farming conditions and the large size of many Australian properties meant that farmers in this country were early adopters of technology, especially larger machines suited to broad acre cropping.

The exponential development of the internet over the past fifteen years has meant that there is now a huge amount of information available to enthusiasts, who are able to share technical information, the sale and swapping of spare parts and even the location of derelict vehicles on a worldwide basis. This would suggest that the necessity to hold actual examples of particular items for research purposes is less critical than it was in the 'pre-internet' period.

The above suggests therefore that conditions have changed markedly in the fourteen years since the original Titan application was denied. It is reasonable therefore to conclude that, while the subject IHC Titan is an item of particular historic importance, its export would not damage the nation's cultural heritage to a degree where an export permit should not be granted.

Appendix 2 – Notes from Museum Victoria accompanying IHC 10-20

By 1915, the International Harvester Company (IHC) was the world's leading tractor manufacturer with successful designs such as the Mogul 12-25 and 8-16 capturing a third of U.S tractor sales. IHC also owned the McCormick & Deering brands which gave the company enormous market power which was challenged in Australia by H.V McKay who launched a relentless and successful campaign to introduce federal tariff protection for local agricultural machinery makers. In response, IHC established a local organisation in 1912; International Harvester Australia Pty Ltd (IHA) allowed the firm to assemble equipment from imported components in Australia.

Introduced in 1915, the Titan 10-20 model built on the experience of earlier successful IHC tractors, with a total of nearly 80,000 10-20s manufactured at the IHC plant at Milwaukee, Wisconsin, USA. The 10-20 was the smallest model produced by IHC with a total weight of 2,372 kgs (5,225 lbs). The engine was a kerosene-fuelled, two-cylinder horizontal unit producing around 14.8 kW (20 h.p.) at the belt with a two-speed gearbox. The large front-mounted 117 litre tank held water was for engine cooling which circulated water via simple temperature differential thus avoiding the use of a water pump or radiator fan assembly. The Titan 10-20 was imported into Australia by IHA. In common with many early tractors the design is crude with a steel girder frame and twin chain & sprocket drive to the rear wheels.

This Titan 10-20 tractor was used on the 'Green Mountains' poultry farm in Croydon from the early 1950s until its donation in 1964. The Titan tractor was used to plough the paddock in which feed for the chickens was grown. It was acquired in poor condition in 1964 and was subsequently restored cosmetically by Vivian Expositions for display.

http://ag-museum.mb.ca/artifacts/gaskerosene-tractors/ihc/ihc-titan-type-d-45/

The Type D 45 had its origin in the IHC Reliance Type D of 1910. IHC's Milwaukee plant began producing the 20 Horsepower Reliance Type D using IHC "Famous" engine design that was also used in IHC's Type B 20 horsepower tractor. The Type D 25 horsepower tractor soon followed and then the Reliance Type D 45 horsepower appeared. The Reliance Type D 45 featured a 2 cylinder engine that was the first engine specifically designed for use in a tractor by IHC. A distinctive rectangular tank type radiator was developed for the Reliance Type D 45. In 1911, the Reliance models were renamed Titan. The Type D 45 featured a 2 cylinder horizontal engine running at 335 RPM with force feed oiling, make and break ignition, hit and miss governor and a tank type radiator with a pump. The transmission offered one speed ahead and one speed in reverse. A spur gear drove onto the live rear axle through a bull gear with a differential in the right rear wheel. The Type D 45 developed 45 horsepower on the belt and 27 horsepower at the drawbar. It was rated as being able to pull a 10 bottom plow. The Type D 45 was replaced in 1914 by the Titan 30-60. Between 1911 and 1914, 1319 Type D 45s were built. The Titan tractors with multiple cylinders, in general, featured engine cylinders that lay side by side where as the Mogul designs featured opposed cylinder engine designs.

IHC Titan Type D Tractors known to be in Australia -

https://www.steel-wheels.net/registerihc.html

Titan Type D 20hp	TD224 (UB4034)	1912	Canberra, Australia
Titan Type D 20hp	TD329 (UB4286)	1912	Michigan, USA
Titan Type D 20hp	n/a	n/a	Oregon, USA
Titan Type D 20hp	n/a	n/a	South Island, New Zealand
Titan Type D 25hp	TM309 (XB379)	1911	Reynolds-Alberta Museum, Wetaskiwin, Alberta, Canada
Titan Type D 25hp	TM776 (XB1252)	1911	Western Australia, Australia
Titan Type D 25hp	TM881 (XB1193)	1911	Texas, USA
Titan Type D 25hp	n/a (XB1570)	1911	Divide County Threshing Bee, Crosby, North Dakota, USA
Titan Type D 25hp	n/a (XB2535)	n/a	DD Living History Farm, Roxbury, Connecticut, USA
Titan Type D 25hp	n/a	n/a	Baldwin County Heritage Museum, Elberta, Alabama, USA
Titan Type D 25hp	n/a	n/a	Maryland, USA
Titan Type D 25hp	n/a	n/a	Michigan, USA
Titan Type D 25hp	n/a	n/a	Montana, USA
Titan Type D 25hp	n/a	n/a	Ederville, Carthage, North Carolina, USA
Titan Type D 25hp	n/a	n/a	Pennsylvania, USA
Titan Type D 25hp	n/a	n/a	Western Development Museum, North Battleford, Saskatchewan, Canada
Titan Type D 25hp	n/a	n/a	Western Development Museum, Saskatoon, Saskatchewan, Canada
Titan Type D 25hp	n/a	n/a	Seine-et-Marne, France
Titan Type D 25hp	n/a	n/a	Queensland, Australia
Titan Type D 25hp	n/a	1911	Victoria, Australia
Titan Type D 25hp	n/a	1911	Western Australia, Australia
Titan Type D 25hp	n/a	1913	Western Australia, Australia
Titan Type D 25hp	n/a	n/a	Western Australia, Australia
Titan Type D 18-35	TB131	1913	DD Living History Farm, Roxbury, Connecticut, USA
Titan Type D 18-35		TB210	1913 Stuhr Museum of the Prairie Pioneer, Grand Island, Nebraska, USA
Titan Type D 18-35	TB237	1914	Divide County Threshing Bee, Crosby, North Dakota, USA
Titan Type D 45hp	TN239	1911	Michigan, USA
Titan Type D 45hp	TN250	1911	Divide County Threshing Bee, Crosby, North Dakota, USA
Titan Type D 45hp	TN530	1912	Illinois, USA
Titan Type D 45hp	TN601	1912	Canberra, Australia
Titan Type D 45hp	TN642	1912	Reynolds-Alberta Museum, Wetaskiwin, Alberta, Canada
Titan Type D 45hp	TN643	1912	Manitoba Agricultural Museum, Austin, Manitoba, Canada
Titan Type D 45hp	TN647	1912	England
Titan Type D 45hp	TA108	1912	Texas, USA
Titan Type D 45hp	TH259	1914	American Thresherman Association, Pinckneyville, Illinois, USA
Titan Type D 45hp	n/a	n/a	DD Living History Farm, Roxbury, Connecticut, USA
Titan Type D 45hp	n/a	n/a	Ederville, Carthage, North Carolina, USA
Titan Type D 45hp	n/a	n/a	South Dakota, USA
Titan Type D 45hp	n/a	n/a	Saskatchewan, Canada

Australian Government

Department of Communications and the Arts

Protection of Movable Cultural Heritage Act 1986

Significance Assessment Form

Part A

Application number:

Permanent Export Permit ☒ *Temporary Export Permit* ☐

Object being assessed:

25 horsepower single-cylinder internal-combustion powered tractor on steel wheels, engine no. XB2409, manufactured in 1912 by the International Harvester Co., Chicago, USA.

The object is being assessed under Part(s):

The object being assessed is a Class B object under Part 4: Object of Applied Science or Technology under parts 4.2(a) the object is a machine relating to human enterprise and activity, 4.3 (b) (iii) it was used in Australia at least 30 years ago, 4.3 (c) object as mentioned in 4.4, 4.4 (a) (iv) it is a piece of equipment intended for use in agriculture, 4.4 (b) (i) it is a manufactured object relating to engineering being a type of engine, 4.4 (e) (i) it is an object of road transport, being a self-propelling engine.

Is the object an APO? ***Yes*** ☒ ***No*** ☐

The object meets the criteria of the Control List and is therefore an APO.

Part B

Where the object is an APO

*If the object is **not** and APO, proceed to Part C.*

Would the permanent export of this APO significantly diminish the cultural heritage of Australia?

Export of this tractor will significantly diminish the cultural heritage of Australia. Refer to section 7 of the significance assessment report.

Should the object be granted an export permit? ***No***

If a permit is granted a detailed record of the engine should be made and lodged with an appropriate library

Would the temporary export of this object significantly diminish the cultural heritage of Australia?

Not applicable – applicant is seeking permanent export

I have completed the significance assessment following.

Part C

Significance Assessment Report

Name of object

1. Brief description of the item:

Single-cylinder 25 horsepower gasoline powered tractor, with four steel wheels, tractor no. TM (unidentified), engine no. XB2409, manufactured in 1912 by the International Harvester Company of America, Chicago, USA (IHC) at their Milwaukee plant. The tractor was imported by the International Harvester Company's Australian branch, and sold by a local agent, most likely to a customer in Queensland.

2. Type of application applied for:

Permanent export permit.

3. How was the object examined?

The tractor was assessed from photographs supplied by the applicant. No physical examination was undertaken. Consultation with the previous owner, published sources, and on-line references were used to assess the object. This report was prepared in accordance with Guidelines for *Expert Examiners Under the Protection of Movable Cultural Heritage Act 1986*, dated 1 July 2014.

4. Assessment Criteria

4.1 Significance values

- Historic Significance

The International Type D tractor has historical significance because it is was associated with the first period of introduction of internal combustion powered tractors in agriculture. Given its location when recovered for preservation it was most likely associated with the introduction of mechanised ploughing of canefields in Queensland during the pre WW1 period starting in 1909. There had previously been limited application of steam ploughing engines on larger sugar cane farms. The introduction of the tractor allowed direct ploughing fields with a more affordable and smaller machine (when compared with a traction engine or steam ploughing engine) than had previously been available, however tractors at this time were still very large machines when compared with smaller tractors which became popular after WW1. The transition to using tractors was a significant event for farmers as they were more versatile machine and significant labour saving device associated with sugar production industry.

The International Type D tractor is also historically significant as one of a limited number of surviving examples of the large pre WW1 tractor design from the first generation of internal combustion tractors used in Australia. Its construction date of 1912 places the tractor in the first phase of the development of the internal combustion powered tractor, and as such at the time the design of tractors varied between makers as new ideas were tried.

The known history of this tractor commences in the 1980s when the remains of the tractor were purchased at a clearing sale at Rockhampton, Queensland, s22(1)(a)(ii) a tractor collector and restorer. The tractor was in pieces, and had last been used at a sawmill where the engine had been removed from the chassis and used to drive machinery. At the time of the clearing sale, all the parts of the tractor were gathered into a pile and sold as one lot s22(1)(a)(ii) . Refer to Figure 1 and Figure 2 for photos of the tractor as found.

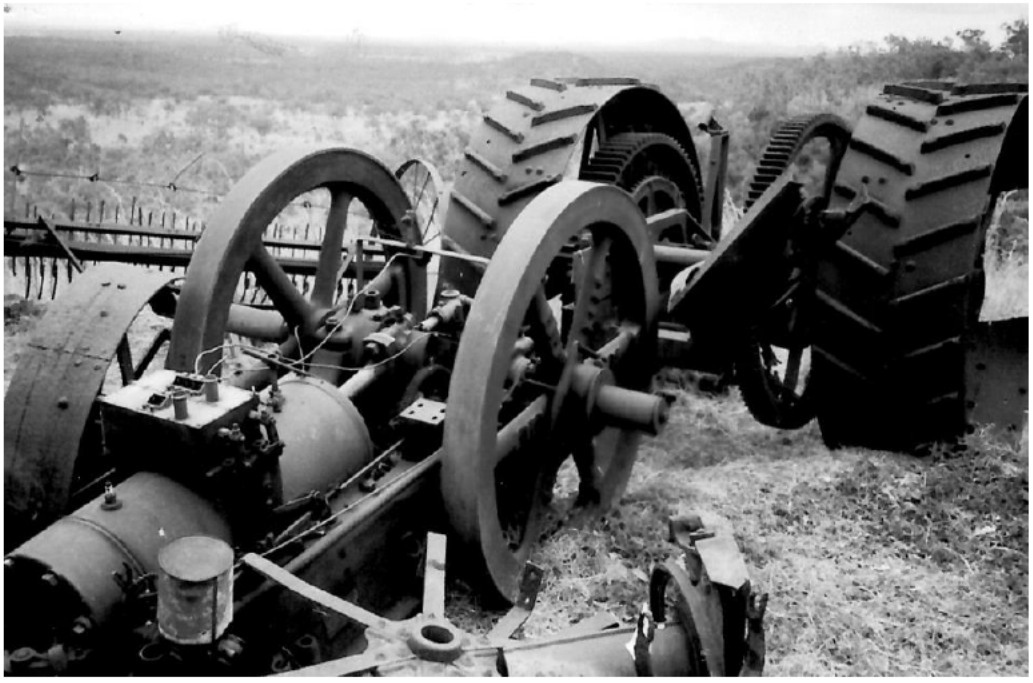


Figure 1 Titan Type D tractor as found at the clearing sale at Rockhampton. Note the major components of the tractor are present comprising the engine, rear wheels and drive gears. The front wheels are present with a portion of the rim missing from one wheel in the foreground. Note the presence of the mechanical lubricator mounted on top of the engine cylinder s22(1)(a)(ii)

s22(1)(a)(ii)

Figure 2 Titan Type D tractor as found at the clearing sale at Rockhampton. Note the major components of the tractor are present comprising the engine, rear wheels and drive gears. The front wheels are present with part of the rim missing from one wheel in the foreground. Note the presence of the engine mechanical lubricator mounted on top of the engine cylinder s22(1)(a)(ii)

The first owner of the tractor is not known. It is reasonable to conclude however the tractor's working life was in the region around Rockhampton, Queensland.

The construction date of late in 1912 indicates the tractor was most likely sold to a customer in Queensland in 1913. This was during a period of the introduction of internal-combustion (IC) powered tractors to farmers, and the start of the replacement of steam traction engines and portable steam engines. The advantages of an IC powered tractor when compared with a steam traction engine were significant as it did not require a boiler ticket qualification to operate it, it was easy to start immediately compared with a steam engine which had to be heated over several hours to raise steam, ease of providing liquid fuel rather than solid fuel such as coal or wood, and the regular supply of water for raising steam were eliminated. This meant the IC tractor was of immense appeal to farmers as an improvement in efficiency, and a great labour saving device. The expense of these new large tractors however was a limitation, and generally only larger farms were able to justify their cost, and were early adopters of this new technology. They were primarily

used for direct ploughing where the plough was towed behind the tractor. Steam traction engines had been used for direct ploughing on occasions but were of limited success as their size generally compacted the earth too much. Some larger cane plantations used steam ploughing engines, where a large steam ploughing engines was placed on either side of the field and a plough pulled across the field and then returned, however this was restricted to the largest farms due to their cost.

The novel nature of the internal combustion tractor and its application to mechanised ploughing, at the time meant there were regular demonstrations by various agents on local farms to introduce farmers to these new machines, and show them working under local conditions. There were regular reports in local newspapers at the time, and the IHC were active in Queensland promoting their tractors.

First Tractors in Queensland

The first claimed use of a tractor in Queensland was recorded in April 1909. The make of the tractor was not recorded. It was purchased by W. F. D. Yonge of Puslinch, Pittsworth, and used for ploughing. The article noted the tractor as the first of its class to be used in Queensland, and only the third in the Commonwealth, with two more tractors to be delivered soon on the Darling Downs at Warwick, and another further west (*Darling Downs Gazette*, 1 April 1909, p.8). The first IHC tractor exported to Australia was in 1908. This and a second tractor exported to France, were the first tractors exported overseas by IHC (Seyfarth, p.31). This was a FD (friction drive model) (Quick, p.20). It is possible it was the tractor purchased by W. F. D. Yonge, but no references connecting the two events have been found.

Use of IHC Tractors for Ploughing in Queensland Canefields

While the provenance of the tractor which is the subject of this assessment is not known, there were a number of references to the sale of IHC tractors in the period 1909 to 1913 to farmers in the region around Rockhampton and other parts of Northern Queensland to be used for ploughing canefields. It is reasonable to conclude from these multiple references that this tractor was probably used in a similar role.

The Sydney Mail, December 4, 1918. 21

A PICTORIAL MISCELLANY FROM QUEENSLAND.

Photo: R. J. Belbin. STEAM TRACTOR PLOUGH AT WORK IN THE MACKAY CANEFIELDS.

The high cost of horseflesh and labour has led in a number of instances to farmers co-operating in the purchase of this labour-saving appliance. They do their own ploughing and also undertake much of their neighbours' work with profit. With the aid of the tractor not only is the land ploughed, but the virgin soil is grubbed, firewood and chaff are cut, water is pumped, and timber is sawn.

Figure 3 Photograph of an IHC type D tractor at work ploughing in the canefields at Mackay, Queensland in 1918. The reporter has incorrectly described it as a steam tractor. (The Sydney Mail, 4 December 1918, p.21)

In March 1912 it was recorded that the IHC had delivered one of their latest tractors in Bundaberg. The article noted that "quite a number of these tractors have gone into the northern sugar fields during the past eight months, and they are giving every satisfaction." The tractor was demonstrated ploughing over two days at Windermere with farmers invited to view the tractor working (*Bundaberg Mail & Burnett Advertiser*, 20 March 1912, p.2). It was sold to a farmer at Doolbi who planned to use it for contract ploughing (*Bundaberg Mail & Burnett Advertiser*, 10 May 1912, p.3).

In June 1912 the first exhibition of power ploughing in the district of Mackay was conducted with an IHC 25 horsepower tractor at H. D. Walker's farm. The tractor was sold to H. Harris at Homebush, Queensland, and a further demonstration was conducted at his farm (*Daily Mercury*, 22 June 1912, p.7).

An example recorded close to Rockhampton, was the sale in April 1913 to Mr John Moser of Alton Downs of an IHC 25 horsepower gasoline tractor, a six disc Newell-Saunders engine plough (24 discs), and a Bettendorff farm truck. These were sold by the local agents for IHC, W. Breckels & Co. Prior to the machinery being sent to the farm, it was displayed at the Australian Estates and Mortgage Company, Stanley Street, Rockhampton for a few weeks. Due to the novel nature of tractors, many farmers did not have any operational experience with them, so IHC sent out an expert with the tractor to train the farmer in its operation. In this case Mr Ready accompanied the tractor, and the demonstration was advertised so other interested farmers could attend to see the tractor working. This article noted that several of these plants had been installed in the southern and northern districts, and were found to be well suited to the canefields. The tractor and disc plough were capable of ploughing at the rate of an acre an hour. The tractor was also suitable for driving a sawmill, an irrigation water pump, or for chaff cutting (*Rockhampton Morning Bulletin*, 19 April 1913, p.6).

Introduction of IHC Tractors in Other States of Australia

IHC were also active in other states of Australia during the same period. A number of tractors were sold to West Australian farmers, also for use direct ploughing. The West Australian agents, Wills & Co. exhibited for the first time in October 1911 at the Royal Show a 25 HP Titan tractor, having already sold eighteen 20 horsepower tractors in 1911 (*The West Australian*, 12 October 1911, p.8).
A demonstration of a 20 horsepower IHC tractor in July 1909 in Kadina, South Australia, which was one of the first IHC tractors in the state, attracted over 100 people to view it working (*Kadina & Wallaroo Times*, 17 July 1909, p.2).

Tractor Identification & Production Date

The Titan Type D tractor, 25 horsepower size was sold between 1910 and 1914. The tractor was identified with two numbers, a tractor number and an engine number, and they were built in IHC's Milwaukee, Wisconsin, USA factory.

This tractor is known to be a 25 horsepower model based on the engine size, with the engine having a 10" (250mm) bore and 15" (381mm) stroke. This was referred to as the XB type hit and miss type engine assigned to 25 horsepower gasoline tractors. In 1912 the XB engines were produced between numbers 1637 and 2485. The engine number 2409 is stamped on the end of the engine crankshaft, placing its date of manufacture in the latter part of 1912.

The tractor was referred to as the TM model and was made between 1910 and 1914 between tractor serial numbers TM101 to TM1857. It was manufactured in the Milwaukee plant and referred to as a 25HP Milwaukee gear drive traction truck Titan type D in the company's manufacturing records (IHC, *Milwaukee Tractor Production Records*, 1905-1963). The tractor number is not known. This was generally stamped into the chassis frame, and is no longer present due to initially corrosion of the frame, and followed by replacement of this section during restoration. Manufacturing records linking the engine number to the tractor number do not appear to be available. The tractor number is therefore likely to fall in the range for 1912 of TM 1160 to 1701, so it is reasonable to consider the tractor was made in 1912 on the basis of the engine number. 1757 of this model were built between 1910 and 1914, with 52 in 1910, 1007 in 1911, 542 in 1912, followed by a rapid decline with only 74 made in 1913, and 82 made in 1914 (Seyfarth, p.87).

Technical Evolution of the Internal Combustion Tractor

The application of mechanisation to agriculture can be broken into phases. The first phase between 1850 and 1910 was the practical application of steam to farming. The second phase from 1900 to 1914 saw

the introduction of internal combustion powered tractors as a useful machine on the farm. The later phases from 1914 onwards saw the introduction of small tractors, and the total displacement of horses, and steam from agriculture (Seyfarth, p.9).

The period of tractor development from 1900-1914 was a time of very fluid design ideas and evolution with variation in design and features between manufacturers. Tractors in this period were generally large and mimicked the size of steam traction engines. Tractors general comprised a chassis design upon which the engine and drive train components were mounted. The first frameless tractor made by Wallis Tractor Co., USA in 1913. This eliminated the chassis rails and used a cast gear case integral with the engine. The hit and miss governor, was replaced by throttle governor by 1915 (Simpson, p.105-106). The tractor which is the subject of this report is directly associated with this introductory period of internal combustion powered tractors to agriculture.

In the USA tractor production doubled by 1917, and designs moved away from large heavy tractors which were a hangover from the steam era, to lighter tractors such as the Fordson, which was mass produced by Henry Ford and far more versatile and affordable. (Simpson, p.107) Rubber tyres were introduced around 1932 (Simpson, p.112).

- Aesthetic Significance

Not applicable.

- Scientific, Technical or Research Significance

The Titan D type tractor has technical or research significance as an early example of internal combustion powered tractor design. Its construction date of 1912 is from a period of the introduction of this new form of machine for the first time to many farms. The design embodied by this tractor was designed by IHC, and was at time of great variation in design between manufacturers. The tractor therefore has research value allowing the comparison technically of its design with other models by IHC, as well as other USA makers, comparison with the equivalent sizes of tractors with British makers of the same period, and the limited Australian tractor industry then in its infancy.

- Social or Spiritual Significance

Not applicable.

4.2 Comparative Analysis

- Provenance

The known provenance of this Titan tractor is limited to its date of manufacture identified from the engine number and manufacturer's records, and the time when it entered preservation in the 1980s, after being purchased at an auction in Rockhampton. The original purchaser and its working role are not known. There is strong circumstantial evidence to suggest that IHC tractors of this size were applied widely to ploughing canefields in Northern Queensland. The fact this tractor was found in Rockhampton, places it in the region where they were used in this manner.

- Representative or rarity

The Titan Type D tractor is a rare example in Australia with only five examples recorded by the American based website, Steel Wheels. They are recorded as being in Western Australia, or Victoria, and the Victorian example is known to have been sourced from Western Australia.

A second Titan type D tractor had previously been known to be at the Jondaryan Woolshed as this was used as a reference tractor during the restoration of the tractor which is the subject of this report. It is known this tractor was exported to the USA some years ago. There is not a second tractor listed in Queensland on the Steel Wheels list. s22(1)(a)(ii)

The tractor, which is the subject of this report, is a rare example, and the only example thought to have had an original provenance associated with farming in Queensland. The others all appear to have been associated with farming in Western Australia. It is a good example of its type, and no other better examples with a Queensland provenance are known, and it is associated with the significant technical progress of the time with the introduction of mechanisation to farming.

- Condition, completeness or intactness

The Titan Type D tractor is mechanically complete, and is in operating condition having been restored. The restoration is an older restoration, and limited detail is available about the extent of work required on some components, so this discussion is limited broadly to the larger elements of the tractor. Before considering the condition of the tractor, a brief examination of the design of the tractor and its main features is included.

The Titan D type tractor frame was a chassis construction with two 10 inch (250mm) C form steel channel rails running the length of the tractor. The engine was mounted to the chassis, along with castings housing the rear axle and drive gear shafts.

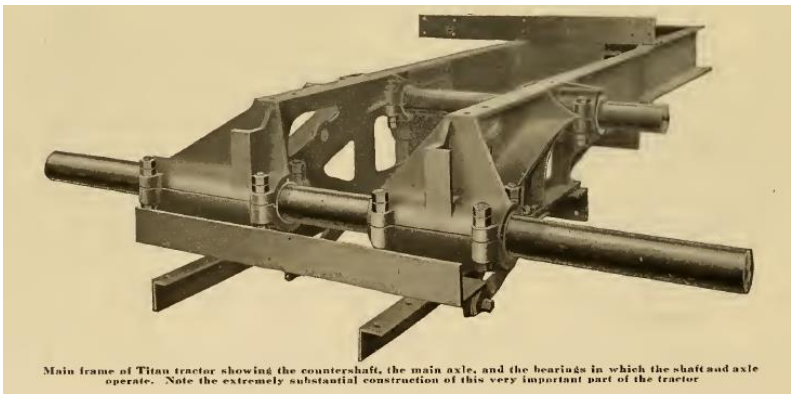
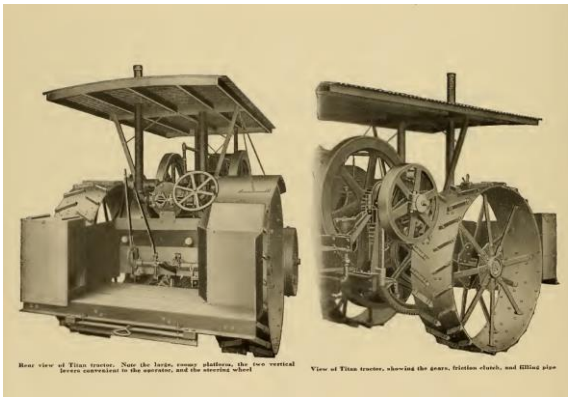


Figure 4 Illustration of the chassis construction, rear axle, and counter shaft mount (IHC Titan Gasoline Tractor catalogue)

The engine comprised a single horizontal cylinder. It was cooled by a cooling tower type of radiator mounted at the front with a circulating pump mounted on the engine. Lubrication of the engine was by mechanical lubricator mounted on top of the engine, the axle bearings had grease cups. Power was transmitted from the engine via spur gears to the rear axle. There was one speed forward, and one reverse speed. A friction clutch was provided. The operator stood on a rear platform, and a canopy comprising a wood frame with iron roof was generally fitted. The Titan model was distinguished from other models in IHC's range at the time by the live rear axle, while all other IHC tractors had a stationary rear axle (a live rear axle is one with suspension (i.e. springs between the axle and the chassis, whereas a stationary axle is rigidly fixed to the chassis). Rubber tyres were yet to be applied to tractors, so the wheels were steel rims. Steering was by chain to a shaft mounted under the chasing, with the front wheels on a fixed axle pivoted in the middle. The shipping weight of the tractor was 16,600lbs (7530kg) (IHC, *IHC Gasoline Tractor catalogue*).



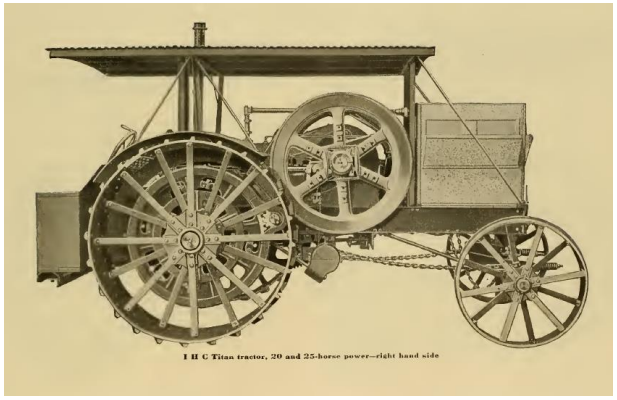


Figure 5 General appearance of the Titan tractor, showing canopy, rear platform, and radiator (IHC Titan Gasoline Tractor catalogue)

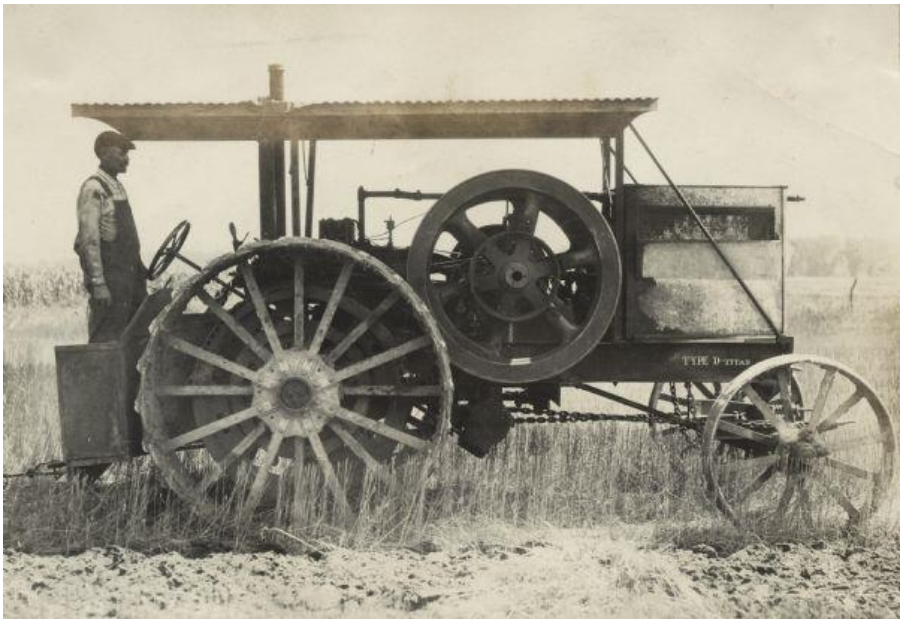


Figure 6 An example of a Titan D tractor in use illustrating the typical original appearance of this type of tractor, USA, c.1918 (IHC Archives, Wisconsin Historical Society)

The Titan D type tractor which is the subject of this application has undergone restoration. It was purchased in a disassembled condition at an auction (refer to *Figure 1* and *Figure 2*). The major components of the tractor were present comprising the engine, mechanical lubricator, gear drive train, chassis, and front and rear wheels. The front section of the chassis was corroded badly, and the some of the wheels had sections cut out of them when the previous owner required a piece of steel for another project. The canopy, being originally of timber construction was no longer present.

The restoration of the tractor was undertaken with reference to another more complete privately owned tractor s47F . Extensive photographs and measurements were taken to copy the parts to the best of the ability of the owner. This tractor has since been exported to the USA s22(1)(a)(ii) .

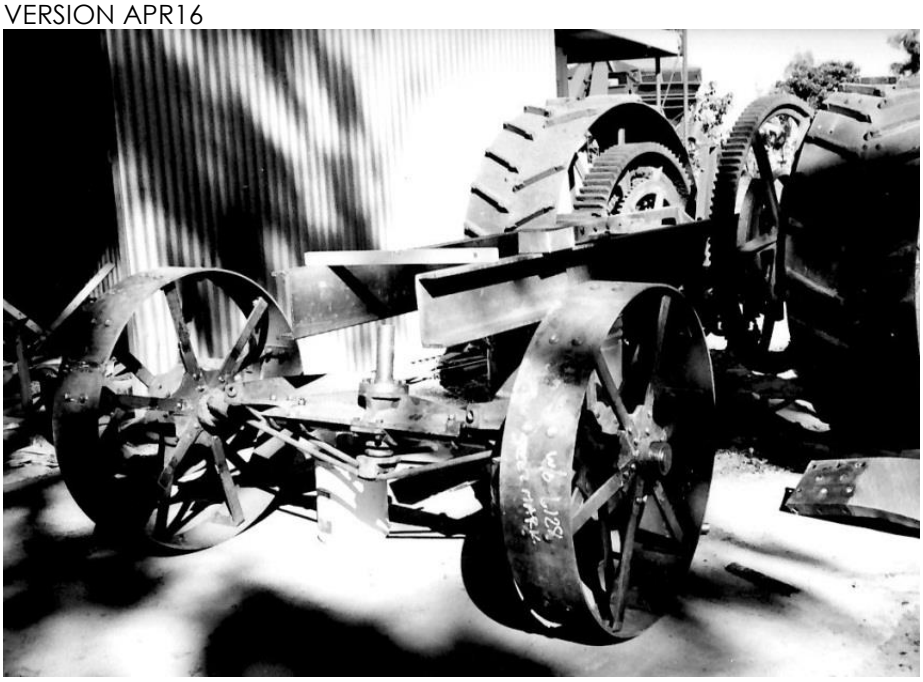


Figure 7 Titan D tractor under restoration, note the new C channel chassis rails. s22(1)(a)(ii)

Figure 8 Titan D tractor under restoration, fitment of the rear platform support rails, and repair of missing rear wheel treads. s22(1)(a)(ii)

Two photographs are available of the Titan tractor during its restoration. The front half of the chassis rails were replaced with steel sections of the same proportions due to the original being heavily corroded (which also resulted in the loss of the tractor number originally stamped into the rail). The original channels had two closely set bends to narrow the gap between the chassis rails at the front which were not reproduced during the restoration. The absence of this feature does not detract from the appearance of the tractor. The missing sections of steel from the wheels were replaced. New support rails for the rear platform were also made. These features are illustrated in **Figure 7** and **Figure 8**.

While the mounting holes are present in the chassis for a canopy, this has not been reproduced. The original radiator, being of light sheetmetal construction, and fine mesh, and subject to exposure to water had corroded and been discarded at some time. Reference to the other tractor resulted in a reproduction radiator

being fitted. It has the correct visual appearance but may not be of the exact materials and construction as the original. From the photos supplied it appears to be of welded construction and using expanded mesh.

An electric starting mechanism was added during restoration for ease of starting. This comprised a bracket and pulley friction drive on the rim of the flywheel. These additions can be easily removed from the tractor.

Figure 9 Electric starting mechanism, and box to the right for the battery s47F

The mechanical lubricator fitted on top of the engine is original, and was present when the tractor was purchased at the auction (refer to *Figure 1*). The original low-tension ignition system was retained during the restoration. The original practice saw these tractors started on petrol and then operated on kerosene, from a second fuel tank. The second tank was not reproduced during the restoration.

With any restoration of a machine in the condition it was found in, many mechanical parts would have required repair or servicing to return the tractor to operation. Apparently the clutch mechanism was rebuilt, and the brake pedal lever is longer for more leverage.

Based on the information supplied and sourced by the examiner, the majority of the significant large parts are original to the tractor, i.e. the engine, drive train, and rear wheels. The most visually apparent non-original component is the radiator, which has at least been reproduced to have the same appearance as the original. The photo of a similar type D tractor working at Mackay (refer to *Figure 3*) indicates mudguards and a full length canopy were most likely fitted as original equipment. These are not present on the restored tractor.

The variations to the tractor made during its restoration are reversible, and are generally on discrete components which can be removed, or are identifiable as not being original. Any further restoration work will also be to discrete components and therefore can be easily identified, and will be reversible. There are sufficient photographs and documentation surviving from the original manufacturer for reference in the event the canopy is to be recreated.

Most surviving examples of tractors of this era have undergone restoration. The greater use of thin sheetmetal in their original construction resulted in parts of the tractor such as the radiator invariably corroding away. Even if the tractor was operational for a greater length of time, the radiator would most likely encounter extensive repair or replacement to keep it going. Most examples of these tractors have been restored from abandoned wrecks found on farms or other locations, and no unrestored original fully complete examples are known to the examiner.

The five examples in Australia are all privately owned. Information is not available on all of these regarding their provenance, or condition. The brief information available on these in Quick's book indicates most tractors of this age have undergone significant work when restored to operation by their owners (Quick,

p.27, for example s22(1)(a)(ii) example as found in Western Australia). Some of these have been restored, and photos of several of these found on the internet or noted in Quick's book show them to be fitted with a canopy, and visually they are consistent with the general appearance of these tractors. The canopies on these other tractors do not appear to be original, and all appear to have been rebuilt. Comparatively it is therefore difficult to comment on whether other tractors are more complete examples mechanically or structurally to this tractor. The Titan D tractor previously owned by s22(1)(a)(ii) and the subject of this report featured in Quick's book (Quick, p.29).

- Interpretive potential

The Titan type D tractor has interpretative potential. It can illustrate the historical significance of the introduction of mechanisation to the ploughing of the canefields of northern Queensland, as the sole surviving known example to originally be used in Queensland. It also has interpretative potential to demonstrate the history and evolution of tractor design, being an example from the first generation of internal combustion powered tractors.

5. List details of any other comparable objects

To the knowledge of the examiner there are no International Titan type D 25 horsepower tractors in public Australian collections. In general, there are very few examples of the large pre-WW1 tractors in public collections. The only large tractor in a public collection known to the examiner is at the Swan Hill Pioneer Village which has a restored example of a British made Marshall C type tractor.

Several tractors are in non-public collections. The Burdekin Machinery Preservationists, Queensland own a Marshall C type 2 cylinder tractor in restored condition. At the Booleroo Centre there is an IHC Type C 20 horsepower Mogul tractor, tractor no. TL2009, engine no. UB2609, 1911 which is thought to be privately owned. None of these are equivalent to the Titan type D tractor.

6. Statement of significance

The International Type D tractor (engine no.XB2409) has historical significance to Australia because it is representative of the first internal combustion powered tractors introduced into the canefields of Queensland during the pre WW1 period from 1909 to 1914. The provenance of this tractor is not known, however many examples of this type of tractor were recorded being sold to farmers for direct ploughing canefields, and there is a high probability this tractor was used for this purpose.

The tractor is historically significant as an example of the first phase of internal tractor design dating from prior to WW1. The design of tractors at this time was based on their being large, and of a chassis construction. Their size therefore limited their affordability and restricted the number in use. This tractor is therefore a rare example of the earliest phase of tractor design before smaller mass produced tractors were widely used on farms after WW1.

7. Significance to Australia

The Titan type D tractor is significant to Australia. The tractor is a rare example of the first generation of internal combustion powered tractors to be introduced on farms in Australia. It appears to be the sole survivor of a group of Titan tractors sold to farmers for use to plough canefields in Northern Queensland, and is therefore associated with the earliest stage of mechanising the sugar cane industry. Australia's cultural heritage will be diminished with the export of this tractor due to it being one of very few pre-WW1 large tractors to survive which was associated with farming in Queensland.

8. Value of object

The value of the tractor as listed by the applicant cannot be confirmed without physical inspection of the tractor.

9. Australian Protected Object Status

Class B Object under Part 4.

10. References

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International Harvester Company of America, undated, *Milwaukee Tractor Production Records*, 1905-1963. Viewed online at http://www.wisconsinhistory.org/ on 20 September 2018.

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Wendel, C. H., 1979, *Encyclopaedia of American Farm Tractors.*

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Institution [If applicable]: s22(1)(a)(ii)

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CERTIFICATION – I declare that I will not disclose the application details to any other parties; and that in assessing this application I have no known conflict of interest.

Signature of Examiner: s22(1)(a)(ii) **Date:** 28/09/2018

[Electronic signatures accepted. Insert signature, then email form and attachments to movable.heritage@arts.gov.au]

Australian Government

Department of Communications and the Arts

Protection of Movable Cultural Heritage Act 1986

Significance Assessment Form

Part A

Application number: PMC2838

Permanent Export Permit ☒ *Temporary Export Permit* ☐

Object being assessed:

Tractor, International Harvester Company, Titan, Type D, 25hp, USA, 1911

The object is being assessed under Part(s):

The object being assessed is a Class A / B object under Part [X]
Class B object under Part 4, 4.4 (b, engineering object)

Is the object an APO? ***Yes*** ☒ ***No*** ☐

This object meets the criteria as a Class B APO because it is of significance to Australia, it was used in Australia more than 30 years ago, it is an engineering object of a kind described in the Control List and is represented by only one similar object in a public collection in Australia.

Part B

Where the object is an APO

If the object is not and APO, proceed to Part C.

Would the permanent export of this APO significantly diminish the cultural heritage of Australia?

No. The export of this tractor would not significantly diminish the cultural heritage of Australia because (a) it is incomplete and has compromised originality (b) there is little information available about its provenance and what is known does not lend itself well to making links with historic themes about Australia's rural development. (c) there are at least three better surviving examples in Australia, one of which is in a public collection.

Should the object be granted an export permit?

Yes.

Would the temporary export of this object significantly diminish the cultural heritage of Australia?

No.

I have completed the significance assessment following.

Part C

Significance Assessment Report

Name of object

1. Brief description of the item:

Tractor, International Harvester Company, Titan, Type D, 25hp, USA, 1911

2. Type of application applied for:

Permanent export permit

3. How was the object examined?

Colour photographs supplied

4. Assessment Criteria

4.1 Significance values

- Historic Significance

The world's first tractors, or self-propelled farm vehicles powered by internal combustion engines, were built by the Charter Gas Engine Company in Chicago, USA, in 1888. However, the first company to coin the term "tractor" to describe its products was the Hart-Parr Company of Charles City, Iowa, in 1906. Their factory was the first in the world dedicated to tractor production.

The tractor has played a relatively much greater role in Australian agriculture than its predecessor, the steam traction engine. This is mainly because of the high cost and ponderous weight of the latter. Tractors were also much more practical to operate: no need for a readily available supply of water, minimal risk of fire, fuel easily supplied and no need for any equivalent of a boiler certificate. For these reasons, the transition in the mode of traction for cultivation on Australian farms was from horse to tractor, with steam traction engines playing only a very minor role. Indeed it was 1950 before the number of tractors on Australian farms exceeded the number of horses.

The first tractors arrived in Australia from England in 1903, when there was only about one steam traction engine per one thousand farms in the country. Towards the end of the 20th century, there were on average more than two tractors on every farm in Australia.

Australian farms have always operated efficiently in order to meet the demands of shallow soils, isolation, harsh environmental conditions, a fluctuating economy and modest government support. Australian farmers have always been receptive to mechanical means of achieving efficient operation and to compete for export markets. Tractors have epitomised the mechanisation of farms in Australia since the early 20th century.

Australia has had its own local industry in tractor manufacture (the first in 1908) but the vast majority of tractors used here were imported from the USA (the main source until about 1920), Britain and Europe.

However, Australian agricultural practice made a slow transition from the horse – much slower than in the United States for example. Horse numbers on Australian farms did not peak until 1919 and it took the mechanisation that accompanied World War II to revolutionise farming methods during the 1950s.

In the early 1900s, the International Harvester Company (IHC) was the world's largest manufacturer and supplier of farming machinery. The company had been formed in the 1890s by the merger of several other US-based agricultural machinery manufacturers. Even after the merger, the growing market allowed other US companies to operate profitably, including Deere & Co, Case and Massey Harris. The IHC launched its first tractor onto the market, with friction drive transmission, in 1906.

Meanwhile in Australia, pioneering Australian industrialist Hugh Victor McKay, manufacturer of Sunshine agricultural equipment, was launching a legal challenge and a war of words in the trade press to prevent the IHC from achieving its stated aim to "capture the entire trade in agricultural implements" in Australia. McKay's anti-free trade lobbying worked and the Government introduced tariff protections. The IHC manoeuvred around the legislation by setting up a branch of the company in Australia in July 1912 with an assembly plant located in Geelong. [However, the locally manufactured (as opposed to assembled) IHC machinery did not include tractors until 1949.]

The IHC was forced to abandon its friction drive tractor models of 1906-1910, designated Types A and B, mainly due to the inadequacy of their hauling capacity for broad acre farming. Between 1909 and 1912, the company designed and built a series of geared tractors, designated Types C and D and with the monikers "Mogul" and "Titan", which enjoyed increasing success in the agricultural industry in the United States, Canada and in many other export markets including in Australia.

Of a total of 2,031 of the mammoth Type D Titans built at the IHC's Milwaukee works, no specific reference could be found from either a local or overseas source to the number exported or how many reached Australia. However, it is likely that fewer than 50 Type Ds of the 20 and 25hp models were imported here, of which only a handful remain.

While the provenance of the subject Type D tractor is only sketchy and its condition is incomplete and is significantly unoriginal, as an early example of a US-built internal combustion powered and geared tractor, it may be attributed a minor degree of **historic significance**.

- Social or Spiritual Significance

The preservation and reactivation of self-propelled engines is one of the principal means by which historic machinery enthusiast groups and collectors of heritage agricultural machinery illustrate the importance of this type of machinery in day-to-day life in rural Australia from about 1880 until the present day (see http://www.csmm.com.au/, http://www.csmm.com.au/field-days.html).

The present-day fondness and high regard for old machinery is expressed in its appeal to potential visitors to Whiteman Park, which incorporates the Tractor Museum of Western Australia: "See, hear and smell the machinery that played such an important part in the early life of our state." (refer https://www.whitemanpark.com.au/attraction/transport-heritage/tractor-museum-of-wa/). This illustrates that a degree of **social significance** may be conferred on such examples of technological innovation, including this tractor and other early examples of the period powered by internal combustion engines.

4.2 Comparative Analysis

- Provenance

According to its former owner s22(1)(a)(ii) , this International Titan Type D 25hp tractor was used in the Rockhampton area. Wear to the final drive to the rear wheels suggests that it was used extensively for ploughing work. The engine was later removed and employed at a sawmill in the area. When found by s22(1)(a)(ii) in 1989, it was in an incomplete and dilapidated condition. The chassis rails and front water tank were badly rusted and many parts were missing.

However, s22(1)(a)(ii) knew of a similar Titan tractor at St George, about 400km west of Toowoomba. s22(1) took measurements of the parts on the tractor at St George that were missing from his tractor, such as the clutch assembly, and accurately reproduced them. The restoration work on the Titan was completed in 1996 after it had reached an operational state. After amassing a substantial collection of tractors and farming machinery on s22(1) property s22(1)(a)(ii) sold the collection, including the Titan that is the subject of this report, at an auction in June 2018.

- Representative or rarity

This tractor is an incomplete, partially original and representative example of the 20-25hp Titan Type D tractor. Of the other six extant similar examples thought to be currently in Australia, three have been confirmed to be currently in preservation, one of which is in a public collection in Western Australia. Another is highly likely to exist in private ownership in Victoria. The other two are of unknown status, apparently in Western Australia and Canberra respectively.

- Condition, completeness or intactness

The restoration of this tractor in the 1990s resulted in the fabrication of many missing or replacement parts, including a badly rusted chassis. While this resulted in a significant proportion of non-original components in its present incomplete state, the previous owner had access to a complete similar tractor and, contrary to the statements made by the applicant that the restoration work was crude, he claims that he was careful to match the specifications of the parts he had to reproduce.

- Interpretive Potential

This object represents the earliest stages of the application of the tractor to provide power for Australia's farms in the first half of the 20th century. It reflects the introduction and general adoption of the internal combustion engine in self-propelled farm vehicles in that era and the dominance of American-made tractors at that time. However, its current incomplete state and compromised originality limit its capacity as an exhibit to illustrate these themes.

5. List details of any other comparable objects

The Steel-wheels website is the most complete and reliable listing of extant tractors. It was compiled and is managed by UK-based s22(1)(a)(ii), who has gained extensive knowledge of the international tractor-preservation scene. Steel-wheels lists seven surviving Titan Type D 20 or 25hp tractors in Australia in unspecified condition or completeness. Research gathered for this report revealed that another 20hp Titan is located near Geelong, Victoria. The seven extant Titans from the Steel-wheels website plus the eighth located at Geelong are listed below with other additional information (listed as "Comments") gained in the preparation of this report. Some of this information is incomplete or unverified.

Model	Serial No.	Year built	Owner/location	Comments
Titan Type D 20hp	TD224 (UB4286)	1912	s22(1)(a)(ii)	Owned and restored by collector and restorer s22(1)(a)(ii)
Titan Type D 20hp	n/a	n/a	s22(1)(a)(ii)	Privately owned and located at s22(1)(a)(ii)
Titan Type D 25hp	TM776 (XB1252)	1911	s22(1)(a)(ii)	Probably the one previously acquired in about 2008 by a collector, s22(1)(a)(ii) whose collection was sold in April 2018 (Lot 591) to a private collector. If so, in very good, complete, restored and operating condition. (NOTE: Its sale price at auction was reportedly $240,000, which reflects its much more original and better condition than the tractor that is subject of this report and *almost certainly the best example remaining in Australia*.)
Titan Type D 25hp	n/a	n/a	s22(1)(a)(ii)	Probably the Titan that is the subject of this report.
Titan Type D 25hp	n/a	1911	s22(1)(a)(ii)	Probably owned by s22(1)(a)(ii) Salvaged from parts found in Western Australia. Condition unknown.
Titan Type D 25hp	n/a	1911	Western Australia, Australia	In Whiteman Collection at Whiteman Park, WA, owned by Planning Commission of Western Australia. Probably used in the WA wheat belt. Relatively complete. Treatment plan for imminent restoration.
Titan Type D 25hp	n/a	1913	Western Australia, Australia	Possibly the one in private ownership in Western Australia (name supplied but not for publication). If so, this Titan was restored, complete and working condition in 2014 and was owned and used by the current owner's grandfather.

Titan Type D 25hp	n/a	n/a	Western Australia, Australia	No information available but could be an alternative to the one above.

s22(1)(a)(ii) . One is the Titan Type D that was used by s22(1)(a)(ii) to reproduce parts for his Titan tractor that is the subject of this report. s22(1)(a)(ii)

s22(1)(a)(ii)

6. Statement of significance

This International Titan Type D 25hp tractor is one of up to seven similar examples remaining is Australia of what was probably fewer than fifty imported from the United States in the period 1911-1913. The International Harvester Company was the leading manufacturer of farming equipment such as tractors in the United States, which in turn was the main source of tractors imported into Australia.

That three of the surviving examples are thought to still be in Western Australia, with a fourth having been recently brought from that state, suggests that they were more popular in WA, probably for use in the wheat belt. The reported provenance of the subject tractor reflects its relatively atypical use, initially for ploughing on a farm in the Rockhampton area of Queensland and the later use of its engine at a local sawmill.

This less usual provenance, together with the incompleteness and compromised originality of this tractor would limit the potential for its interpretation in terms of narratives about how mechanisation in farming in general and the use of tractors in particular assisted the viability of primary industries and affected patterns of rural settlement. This tractor may therefore be attributed a minor degree of **historic significance** in terms of these local, state, national and international themes.

The importance of mechanised farm technology to the economic and technological development of Western Australia and Australia in general and the inherent appeal of the preservation and operation of examples of historic farm machinery is symbolised by the popularity of and public support for preservation groups such as the Campbelltown Steam and Machinery Museum (see http://www.csmm.com.au/) and the National Historical Machinery Association (see https://www.nhma.com.au/National_Historical_Machinery_Association_Inc_VIC_Events.php). Many examples of the various types of tractors and other agricultural machinery are preserved by national, state and local museums and historical societies, such as the Tractor Museum of Western Australia and the Wheatlands Warracknabeal Agricultural Machinery Museum in Victoria (see https://www.whitemanpark.com.au/attraction/transport-heritage/tractor-museum-of-wa/ and http://www.historyvictoria.org.au/events/wheatlands-warracknabeal-agricultural-machinery-museum-50th-annual-vintage-rally). However, once again this tractor's incompleteness and compromised originality does not favour it in these contexts.

This connotes a minor level of **social significance** to the subject tractor.

7. Significance to Australia

Export of this tractor would represent a loss – but not a *significant* loss - to Australia's national cultural heritage because of its (only) minor historic and social significance.

The tractor is relevant to Australia's cultural heritage because of its resonance with several of Australia's Historic Themes (refer *Australia's Historic Themes Framework*, Australian Heritage Commission, 2001) including but not limited to:

3.5.3 Developing agricultural industries
3.8.5 Moving goods and people on land

3.9 Farming for commercial profit

However, other examples of this type of tractor preserved in Australia (see Section 5) would illustrate these themes more effectively, notably the one in the Whiteman Collection in Western Australia which is currently subject to a restoration project and the example in best condition in Australia, formerly owned by s22(1)(a)(ii) and also in Western Australia as at April 2018.

8. Value of object

$A80,000 (this was the sale price at auction in June 2018 confirmed with the auctioneer)

9. Australian Protected Object Status

The object being assessed is a Class B object under Part 4, 4.4 (b, engineering object)

10. References

Books

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http://www.steel-wheels.net/registerihc.html (Accessed 17/11/18)

https://www.whitemanpark.com.au/attraction/transport-heritage/tractor-museum-of-wa/ (accessed 14/07/18)

http://www.historyvictoria.org.au/events/wheatlands-warracknabeal-agricultural-machinery-museum-50th-annual-vintage-rally (Accessed 14/07/18)

https://www.booleroosteamandtraction.org.au/ (Accessed 13/07/18)

https://www.nhma.com.au/National_Historical_Machinery_Association_Inc_VIC_Events.php). (Accessed 17/11/18)

http://tractors.wikia.com/wiki/Titan_Type_D (Accessed 25/11/18)

Knowledgeable persons

s22(1)(a)(ii)

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Institution [If applicable]: s22(1)(a)(ii)

Position/Titl s22(1)(a)(ii)

Address: s22(1)(a)(ii) **State:** s22(1)( ) **Postcode:** s22(1)(a)

Telephone: s22(1)(a)(ii) **Fax:** **Email:** s22(1)(a)(ii)

CERTIFICATION – I declare that I will not disclose the application details to any other parties; and that in assessing this application I have no known conflict of interest.

Signature of Examiner: s22(1)(a)(ii) **Date:** 28/11/18

[Electronic signatures accepted. Insert signature, then email form and attachments to movable.heritage@arts.gov.au]