About Jinma Tractors



Updated 5/3/2002: Added: Where should I buy a Jinma? Section 6

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1. Introduction

The following is general information on the Jinma series of tractors that are imported from China. It is meant to assist the prospective buyer in determining if this tractor is right for them. This information comes from being a Jinma 254 owner, hanging out at the Chinese Tractors Owner Association (CTOA) board, and the information provided by its many contributors.

If there are inaccuracies or there is other information you would like to see added, please email me at <u>JinmaTractor@prodigy.net</u>. I am not associated with the Jinma tractor manufacturer, exporters, importers, or dealers.

The Jinma Tractor is designed and manufactured in China. You will see it referred to as JinMa, Jinma, or just JM. This is one of many Chinese brands. It has become the most popular to be imported to the US. This is primarily due to the fact that the Jinma factory made changes for the US market and addressed some quality issues faster than the other Chinese brands. The Chinese are constantly improving these tractors. Some brands, like Dongfeng, are not far behind the Jinma. Many companies and importers sell these tractors. You will see them with brand names such as NorTrac, EmeryBuilt, Agracat, Farm Boss, and many others. Many dealers will not advertise their tractors as Jinma or being made in China. You will have to deduce that from pictures or discussions with the particular dealer.

While these tractors are sold by multiple of different dealers they are not 100% identical. Dealers have the flexibility to work with the Chinese on their particular requirements. In most cases these differences are not significant. Also, dealers vary on the assembly work they do stateside. They will sometimes substitute US or other manufactured parts, for the Chinese ones. Each will vary in their assembly knowledge and skills. You should contact the prospective dealer to understand what their respective value-add is.

There is little dealer support provided by the factory. Each dealer must gain their knowledge and experience, on their own or from other sources, and experiences. Dealer experience runs from bolt together and go shops, to very experienced with the issues and understanding of what needs to be done with these tractors. Understanding where your dealer falls between these extremes may influence reliability and support, down the road. The CTOA board and its many contributors, strive to provide the knowledge and understanding that is needed to support the Chinese tractors.

2. What to expect in a Jinma tractor

The Jinma tractor is very similar to US tractor designs of the 1950's. Vintage tractors such as the Ford 8N are of similar design. They have been updated with powerful diesel engines, power steering, better brakes, 2 stage clutches, and other improvements.

2.1. Lower Cost

By far the biggest attraction for these tractors is their low cost. Fully assembled tractors can be had for as little as 6K. Doing your own assembly work will provide additional savings. Compare that to Kubota, New Holland, John Deere, or other tractors. Their cost is about double. These tractors are not Kubota equivalents at half the price, though. Outside of other Chinese brand tractors, they are the most reasonably priced new tractors you can buy.

2.2. Powerful Diesel Engines

Diesel engines provide low RPM power ideal for tractor use. They are more rugged and require less maintenance. The Chinese diesels that come in these tractors, are strong, powerful engines. The Chinese having been making diesel engines for many years, and produce more units per year then any other nation. They will typically out perform top brand models of the same hp rating. This is because the Chinese rate their engines on a 12-hour vs. a 1-hour basis. The engines come in numerous configurations, including 2,3, and 4 cylinder models. The two most popular are the TY295 and the Y385. The TY295 is usually found in the 20-22 hp tractors, while the Y385 is popular with the 25-28hp tractors. By the way, the first number in the engine designation usually refers to the number cylinders. The rest of the digits refer to the cylinder bore size, in millimeters. In general, the engines with more cylinders will be smoother running, while the ones with less, will be more powerful, at lower RPM's. The current engines that are available in the Jinma tractor are not EPA certified. I am not aware of any Chinese diesel engine that is EPA certified.

2.3. Easy to work on

The tractors are the equivalent to US autos of the 60's and early 70's. Access to most items is easy and straightforward. Filters and fluid changes are an easy matter to deal with. There are only a handful of different metric size wrenches needed, on these tractors. How things are assembled can be easily interpreted from the "Illustrated Parts Breakdown" manual or from careful inspection and disassembly. No expensive electrical diagnostic equipment is needed.

2.4. Fit & Finish

The fit and finish on these tractors are not on par with many U.S. counterpart tractors. The Chinese keep improving in this area, though. Currently, it wouldn't be uncommon to find some areas of the under carriage or other parts of the tractor that was missing some black paint. The painting of hoods, cowling, and other surfaces, lack the sophistication of multiple layers of baked-on paint, and clear coating. It is also typical that some small chips and scratches take place in shipping and handling. The assembler or dealer can easily handle these defects. Consequently, items on these tractors tend to rust more quickly than normal. Keeping the tractor covered, away from exposure of the elements, becomes more important.

2.5. Control layout

Control layout is typical to what you would find in 1950's vintage US tractors. There are many levers and controls. Most are in easy reach. Like 50's vintage tractors, you are sitting over the transmission. No flat, open deck, like what can be found on many Kubotas, and yard machines. When you mount and dismount the tractor, you need to take care to how you lift and place your feet. The seat is a hard mount, with no springs or damping, outside of the seat foam.

2.6. Hood & Fenders

The Jinma hood has been going through numerous changes over the last few years. They have gone from boxy metal hoods to sleek fiberglass like hoods. Improvements have been made in access to areas, ease of fuel filling, and other cosmetic changes. Future units are expected to change as well. Metal fenders have been the norm for a number of years. The Jinma's are now available with sleek fiberglass type fenders. Metal components, while being more susceptible to rust, are probably more durable in the long run. Rocks and stones that fall from FEL, etc would only cause dents, which could easily be hammered out, by the average Joe.

2.7. Transmissions

The transmissions on these tractors use straight gearing. The tractor needs to be completely stopped to change gears. Failure to do so will result in grinding. Straight gearing also produces more gear wine than more refined transmissions. While there is some variance in transmissions provided, most offer 3 forward gears, 1 reverse, high/low range, and a creeper gear. This makes 16 combinations of possible gearing. Probably more than anyone actually needs. There is no hydrostatic or shuttle shift options with these tractors. Note: 304-354 uses a different transmission.

2.8. Hydraulic pumps

There are a number of different hydraulic pump options that your dealer can select. These range in capacity, and from single to dual pumps. The most popular is a single high volume pump that runs of the timing cover of the engine. This pump is said to be more reliable and can handle the requirements of power steering, rear lift, and a properly plumbed FEL.

2.9. All Metric

All nuts and bolts on these tractors are metric. The metric sizes include 8, 10, 13, 16, 18, 21, and 24 mm. If your dealer includes the standard parts and tools box that come with these tractors, it will include open-end wrenches and other tools you need. If not, a quick trip to the local auto parts store will yield the size you need. Most tractor supply stores keep a good stock of metric bolts.

2.10. Slight Leakage

Some slight oil seepage, small fuel, and other fluid leaks are not uncommon on these tractors. Most are easily rectified, if it does happen. This is another area that they keep improving on.

2.11. Battery

The Chinese battery while large and heavy, does not produce allot of cranking amps. The Chinese typically use the decompression lever for cold weather starting. Some dealers replace the Chinese battery during assembly. If you live in cold climates, you may want to consider replacing it with a 750-1000 CCA battery. Otherwise, use it until it fails and replace with US brand battery.

2.12. Electrical items

The Chinese electrical items could stand some improving. While the starter and alternator are reliable, many of the gauges experience premature failure. Failures of gauges probably increase with exposure to the elements. Most gauges can be replaced with US type parts. BTW, gauges are in metric units, but it is easy to convert. Lights are also easy to retrofit if they should fail. The electrical switches for lights, ignition, etc, can easily be replaced with commonly available parts

2.13. Manuals

The tractors come with 4 manuals:

- Tractor Illustrated Parts Breakdown Manual
- Tractor Operations and Maintenance Manual
- Engine Illustrated Parts Breakdown Manual
- Engine Operations Manual

Reading these can be somewhat amusing given that the Chinese conversion to English is not always 100%. These manuals maybe replaced or supplemented by dealer supplied ones.

3. Model Descriptions

While Jinma tractors are available in 2-wheel drive models, very few dealers offer them. The cost savings usually does not justify giving up the four-wheel drive capability. All four-wheel drive models have a control lever to engage/disengage four-wheel drive. The two wheel drive models are not discussed here.

3.1. JM204 - 224

This size is great for yard work, driveway clearing, and for light fieldwork. It is the most common model to get the turf tire option. It is able to handle decent size implements. This tractor easily handles four-foot box blade, six-foot finish mowers, and four-foot rotary cutters. Average price of an assembled tractor is around 6K.

3.2. JM254 - 284

This is the most common model in the Jinma line, today. It is the only model available from many dealers. This tractor provides a good size compromise to handle large yard projects and fieldwork. It provides good power and traction for hilly areas. Many components are shared with the 204-224 series tractors. The 254-284 is primarily characterized by larger front wheels (16" Vs 12"), larger rear tires, and a larger more powerful engine. It can handle larger implements, such as five-foot box blades and rotary cutters. Prices average around 7.5 – 8k, for assembled tractors.

3.3. JM304 - 354

This is relatively new in the Jinma line. Little user feedback is available at this time. It is a larger and heavier framed tractor than the 254-284, 204-224 series. It has larger wheels and larger more powerful engines. This tractor would be more suited for some farm work than the 254-284 series. It would be more effective for plowing and tending to acre+ parcels. It will handle larger implements than the smaller series. Six-foot box blade and rotary cutters are more suitable to this tractor. This tractor approaches the physical size of the tractor icon Ford 8N, but with much more capability. There is no JM backhoe option for this tractor yet. The JW-03 will not fit this tractor. Three point hitch style backhoes should be able to mount to this tractor. Prices run 8-9k for assembled tractors.

4. Parts Information

4.1. Parts toolbox

The Chinese supply a parts and toolbox with each tractor. The tools comprise of a four open end wrenches, breaker bar and 18mm socket, a special 13-16mm box end wrench possibly used for clutch work, and other misc. tools. One spare oil filter and fuel filter is provided. Other parts include piston rings, head gasket, many o-rings, some light bulbs, and a few other miscellaneous parts.

4.2. Parts availability

Because so many dealers sell Jinma or versions of the Jinma tractor, parts are available from multiple sources. Multiple sources provide competition, which keeps prices in check.

4.3. Can you wait on parts?

If your local dealer is gouging, non-existent, or out of stock, you can go to many other Jinma dealers to order parts. You will have the added expense of shipping, and must be able to tolerate the wait. If the tractor is used in a business such as landscaping or farming, you need to consider that. Lost time might impact you more.

4.4. Warrantee parts

The Chinese provide a one-year parts warrantee with these tractors, which starts the day the shipment is accepted. The shipping is paid for by the dealer or contained in the next tractor shipment. The dealer will send you parts from their stock on hand. Some parts are included to the importer/dealer to handle early warrantee and installation and checkout failures. The factory warrantee is different then the dealer warrantee. Make sure you understand the warrantee being offered to you. All warrantees should be in writing.

5. What options should I get?

There are a number of common options that can be ordered with the Jinma tractor. Most dealers offer some of these options.

5.1. Folding Roll Over Protection System (ROPS)

This allows you to park the tractor inside of a typical car garage. There are two flavors, one to be used with the optional sunshade and one without. Unless you have a dedicated high bay garage or barn, this option is highly recommended.

5.2. Sunshade

Made of white fiber-plastic like material, offers some relief from the beating sun or light rain showers. Also comes in two flavors. One type is for the optional folding ROPS, and one for without. If you will be mowing or working close to trees, you will need the folding type, albeit you would be defeating the safety of the roll bar. The sunshade will also provide a nice place to mount auxiliary lights. Auxiliary lights are recommended when using a FEL. If you are forced to store your tractor outside, it also makes for a nice tarp support mechanism.

5.3. Turf tires

A turf tire option is available. The standard Ag tires will leave an imprint in the yard, unless you have very dry, hard packed soil. The turf tires go a long way in preventing this. They will not perform well in fieldwork such as plowing, disking, and similar activities where the turf tire tread will become clogged with dirt and mud, and will loose traction. The turf tires do not come with wheel weights, which can be a concern if you plan to use a FEL.

Note: Four-wheel drive should not be engaged during yard work, unless the added traction is absolutely necessary. It will cause additional damage to the yard during tight turns. No R4 option is available from China. Some dealers may offer this using aftermarket tires/wheels

Also note: If your tractor was originally equipped with Ag or turf tires/wheels, do not assume you can purchase the other style and use them. The 254/284 will need a gearing change to be able to use 4-wheel drive mode. This is not a minor change and requires extensive disassembly that maybe out of the range of any backyard mechanics. The 204 series should be OK, but check with your dealer to make sure.

5.4. Removable side covers

This option is primarily a cosmetic one. The main drawback is that it prevents easy access to a number of areas. Filter changes and other maintenance is hampered. Definitely not recommended if you plan to use a FEL. Removing the side covers may require removal of the FEL. If you like the looks that they provide, just be prepared to deal with the downside.

5.5. New Flip-up Hood

Jinma has come out with a new hood style for the 254/284 series tractors. This hood provides a sleeker look that goes well with the new fiberglass style fenders. It provides easy access to the battery and radiator area of the tractor. Also has a larger set of headlights over the previous version. The only downside is: FEL installed tractors may require the removal of the front crosspiece to be able to open the hood. The new hood also comes with a new set of removable side-covers. The new hood design allows for removal of the side panels with a FEL mounted.

5.6. Axle mounted power steering cylinder

The 304/354 comes standard with an axle mounted power steering cylinder. It is an option on the 254-284 tractors. The side-mounted cylinder is prone to breaking steering arms when used with loaded FEL, while turning hard when the tractor isn't moving. The steering arm is a reasonable inexpensive part and easy to replace. The axle-mounted cylinder is much stronger, and will prevent this. Unfortunately, you lose about 4 inches of front ground clearance. This is fine for yard and reasonably level fieldwork. This could be a concern if you will be using it in deep ruts, creek beds, and other rough areas. The 304/354 cylinder is mounted above the bottom of the axle and does not suffer the lost clearance.

5.7. Integrated Instrument Panel

An integrated instrument panel is available over the standard separate gauges. It provides all the gauges in a nice compact unit that looks very good on the tractor. You should consider, if one gauge fails within the package, it might require the whole assembly to be replaced. The separate gauges would be easier to find US replacement parts for.

5.8. Spring Mounted Tractor Seat

A new spring mounted tractor seat is now available from the Jinma factory. This is welcome over the hard mounted one that can be a pain in your back and butt after a long day on the tractor. Highly recommended.

5.9. Other options

Power steering, dual stage clutch, tachometer, etc. While these may have been options at one time, most are standard equipment today. If the tachometer is an option on the particular tractor you are looking at, get it. It is very important to know what RPMs a diesel engine is running at. Many of the options discussed above will become standard equipment down the road.

6. Where should I buy a Jinma from?

At the current time, just about anyone can import these tractors from China, given the importing knowledge and having the money to pay up front for delivery. Tractors can be purchased from one-time importers to dealers that have many years of experience with the Chinese factories. Unlike most tractors, there is the ability to buy the tractor in crate form. Each option has a degree of risk and the corresponding amount of savings or cost involved. Don't assume if the Jinma dealer you purchased your tractor from, goes under or stops selling tractors that your warrantee or repair work will be picked up by another Jinma dealer. In most situations, this is not the case.

The following are generalizations. Exceptions exist and some dealers may cover multiple roles and have the benefits that the combination brings.

6.1. Crate Tractors

Crate tractors offer the most dollar savings to the buyer. The purchaser needs to have a decent mechanical ability and tools to perform the assembly. The tractors do not come with an assembly guide or directions from China. Check with your supplier if they provide any instructions. If possible, get a copy of the instructions before purchasing, such that you can determine that it is within your abilities.

Most crate purchases require most or all payment up front. Make sure you understand the warrantee that is being offered and who pays the shipping of warrantee parts, and from where. Make sure you are comfortable with the amount of technical support they can provide.

From time to time, some quality issues do make it out of the factory. The crate purchaser will be at more of a disadvantage to solving and dealing with these issues. You have to be prepared for the possibility of a long wait for parts. While the assembly and most repairs are straight forward, recognize that you are responsible for ALL repairs, be it engine, transmission, or drive train. If something is amiss from the factory, you will have to deal with it.

6.2. One-Time or "Buddy" Deals

It is not uncommon to see a group of guys pool their money to order a container of tractors. Sometimes they need a few people to help fill the container. These deals can be very cost effective. Understand that there is a one-year parts warrantee from the factory, but it does not include shipping from China. Make sure you understand who pays for this shipping. In most cases, you assume the same risks as a crate

tractor even if someone else assembles it. Technical support is determined by the capabilities of the group involved.

6.3. Importer

The importer deals mostly in crate tractors but will have a number of containers delivered per year. The frequency of containers usually determines when non-stocked parts would be available. They may sell directly to the end user or to small dealers or both. Importers have a very good knowledge on how to arrange and get the product into the country. They may have very little hands-on experience assembling or actual seat time in the tractors. Little technical support is usually provided.

6.4. Small Dealer

Dealers with only one or a handful of outlets can provide a very personnel service. They get to know their customers on a friendly basis. You may have to pay slightly more since their overhead has less to be spread over. A one-on-one relationship with your dealer can provide a lot of satisfaction and trust, which can pay-off in the long run. Small dealers are more susceptible to market conditions and supply issues. Buyer gets the opportunity to touch and feel the tractor. Buys what he sees on the lot.

6.5. Large Dealer / Distributor

Theoretically can provide the best support and cost structure over a small dealer. Has the resource to draw upon in unique circumstances that may severely impact a small shop. Has the quantities purchased to influence the factory on options and suggestions. Sometimes, but not always may lack the personal touch. It compares to going to your local hardware store Vs. Lowe's or Home Depot. You may get the best price and return policy, but they may not greet you by name or remember the exact configuration and options you purchased, the next time you stop by. Should have a very adequate parts supply that should not require any waiting, for delivery from China. You get the same touch and feel benefit of a small dealer.

6.6. Sideline Business

You will find Jinma tractors sold by used car dealers to farm supply discount houses, where tractors sales and support only make-up some fraction of their total business. This diversification can certainly help during lean tractor sales periods. It can also lead to some buyer frustrations, when the tractor expert is not on premise. The sales person you talk to, may never have owned or operated a tractor. If you are knowledgeable enough, then this might not be an issue.

6.7. Experienced Chinese Tractor Dealer

This is by far the safest way to go with a Chinese tractor. The longtime dealer has all the experience with dealing with the Chinese and understands and remedies all the issues that can crop up. They have developed the knowledge on what has to be checked, replaced, and fixed on container delivery. They know what parts and the quantity needed to be present to support the volumes of tractors sold. Realize that this experience and support does not come free. They have carefully calculated the assembly and support costs and knows what needs to be charged to sustain their business for the long run. The Chinese Jinma tractor is still relatively new to the USA, so the number of very experienced dealers is very low. If you are fortunate to have one close enough to your location, it is certainly worth the premium for this valued experience.

6.8. CTOA Support

The Chinese Tractor Owner's Association (CTOA) message board provides support and guidance needed for many to maintain and fix their tractors. After monitoring this board for a short time, you will realize that most of the technical responses come from handful of dedicated dealers and owners. One should realize the time and effort that these people spend to help, and there is no guarantee that they will always be there

Your dealer should be given the opportunity to help fix or remedy the situation, prior to bringing it to the board. Bringing a problem immediately to the board can give the wrong impression on the kind of support they are providing. Please post the problem and remedy afterwards, such that others can learn from it.

If the board provides you with answers and helps you with problems and issues, please return the favor to others. Dealers that see people being helped that purchased the product from should also return the favor and help ones that didn't. The board is growing in strength and popularity and it needs everyone's support to continue to do so. This is needed such that the Chinese tractor will continue to grow and improve for the future

6.9. Questions you should ask or consider asking

- How long have they been in business?
- How long have they been dealing with Chinese tractors?
- How often do they get new container shipments in?
- How extensive is their supply of parts?
- What is the written warrantee?
 - What does it cover?

- What doesn't it cover?
- What is the period, and when does it start?
- Are their deductibles and is it per repair?
- Do you need to bring the tractor in?
- Where do you go for repairs?
- Can they provide a list of customers to contact?
- What is their reputation in the area?
- Are tractors and implements their only business?
- Does what the dealer says jive with what research you have done on the tractors?

6.10. Who should I buy a Jimna from summary

You will have to balance what your needs and requirements are to what sales options you have in your area. Careful consideration before buying can be critical to long time satisfaction. No one can tell you what is best for you. If a good fit cannot be made in your area to your needs, consider looking at other tractors and solutions.

7. Summary

The Jinma tractor provides allot of value for the money. While it has some deficiencies, they are minor and can be easily dealt with. This tractor is ideal for the person that can do their own repair and maintenance. At their price point, it brings the possibility of a new tractor, to people who could only consider purchasing used or renting. Best suited for small estate owners and some light commercial work, such as landscaping.