

Attachment Manual & Safety Checklist

MANUFACTURE NOTICE

Introduction	4
Serial Number	5
Attachment Warranty Support	5
Attachment Types & Descriptions	6
Quick Reference	6
Box Scrapes, Dumpster Buckets	6
Root & Rake Grapples	7
Hay Spears, Landscape Rakes	8
Pallet Forks	9
Scrape Blades, Tooth Bars, Trailer Movers, Quick Connect Plates	10
Compatibility Guidelines	11
1. Coupler System Types	11
2. Hydraulic Connection Basics	11
3. Machine Weight/Lift Rating vs. Attachment Capacity	11
Compatibility Checklist	12
Weight Ratings and Load Capacity	13
Understand the Rated Load Capacity	13
Know Your Equipment's Capabilities	13
Safe Operation Practices	14
1. General Safety Rules	14
2. Hazard Awareness	14
3. Pre-Use Safety Checklist	15
4. Proper Attachment and Detachment	15
Maintenance & Storage Guidelines	16
Troubleshooting	17
Forks Not Sitting Evenly	17
Grapple Won't Open/Close Fully	17
Quick Attach Not Locking Properly	17
Spear or Tine Feels Loose	17
Hydraulic Attachment Doesn't Respond	17
Operator Responsibilities	18
Before Use	18
During Operation	18
Maintenance	18
Commonly Used Terms	19
Disclaimer	21

MANUFACTURE NOTICE

This owner's manual contains safety information and instructions for your attachment.

You must read this manual before attaching or using the equipment.

You must follow all safety precautions and instructions.

This guide provides general information and may not cover every specific attachment model or piece of equipment.

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Manual Available Online: www.NolanManufacturing.com

Introduction

Thank you for choosing an attachment from Nolan Manufacturing!

We're proud to support your work and hope your new attachment delivers reliable performance for years to come. Whether you're managing property, farming, landscaping, or handling heavy-duty tasks, our skilled fabricators have built your attachment with durability, safety, and functionality in mind.

From daily chores to demanding jobs, you can count on Nolan Manufacturing attachments to help you get the work done safely and efficiently.

This owner's manual is designed to provide essential information about your attachment. Inside, you'll find clear operating instructions, maintenance tips, and important safety warnings to help prevent injury, equipment damage, or unsafe use.

Here are examples of the types of warnings included:

WARNING

Indicates a potential hazard that could result in serious injury or death.

CAUTION

Identifies a lesser hazard that could still result in injury or death.

NOTICE

Highlights helpful information or alerts you to potential damage to your equipment.

Serial Number

The serial number of your Nolan attachment is stamped on the side, upright.

It may also be listed on the bill of sale or invoice you received from the dealer at the time of purchase.

Attachment Warranty Support

Unlike trailers, **attachments do not require registration.**

All Nolan attachments are automatically registered on the date of purchase through your dealer, so there is no action required on your part.

NOTICE
Keeping your invoice or bill of sale is still essential. It serves as proof of purchase and will be helpful if you ever need warranty support or replacement parts.

WARNING
Follow all hook-up and operation instructions as outlined in this manual.
Failure to follow safety precautions or perform regular maintenance may result in serious injury or death.
Improper use, modifications, or neglect may void your warranty.

Attachment Types & Descriptions

Nolan Manufacturing offers a range of attachments for tractors, skid steers, and compact utility loaders. Each attachment is purpose-built with variations in size, capacity, and coupler style to match different equipment and job needs. Below is an overview of available attachment categories and models.

Quick Reference

- Pallet Forks: Keep load balanced and low; do not exceed rated capacity.
 - Hay Spears: Center bale on spear(s); insert fully before lifting.
 - Trailer Movers: Ensure trailer coupler is properly seated; use on level ground.
 - Buckets & Tooth Bars: Avoid ramming; use slow, controlled motions.
 - Box Scrapes & Landscape Tools: Make multiple passes; adjust top link for aggressiveness.
 - Grapples: Fully secure load before lifting; avoid side loading jaws.
-

Box Scrapes

Box scrapes, or box blades, are designed for aggressive land shaping and leveling. They feature adjustable scarifiers for breaking up soil and rear blades for smoothing, and they connect easily to your 3-point hitch.

Available Sizes: *Choose a size based on your tractor's horsepower and working area.*
4 ft., 5 ft., and 6 ft. widths

Dumpster Buckets

Buckets are general-purpose scooping and hauling tools for dirt, mulch, gravel, or waste.

Available Model:

48" Dumpster Bucket – Compact and heavy-duty

Root & Rake Grapples

Hydraulic grapples clamp and move brush, logs, debris, and scrap. Grapple rakes have digging tines for both raking and clamping, adding digging and sorting capabilities.

Available Models:

- Standard Grapples (48" to 72") – Dual or single arm clamp styles
- Grapple Rakes (48" to 84") – Combination rake and grapple

Width	Type	Cylinder	Hook-Up	Weight Rating
36"	Root - Economy	Single	Dingo	1,200 lbs
48"	Root	Single	Dingo	1,500 lbs
48"	Root	Single	Universal	2,000 lbs
48"	Root	Single	John Deere	2,000 lbs
48"	Rake/Clam	Single	Universal	2,000 lbs
48"	Rake/Clam	Single	Dingo	2,000 lbs
60"	Root	Dual	Universal	2,000 lbs
60"	Root	Dual	John Deere	2,000 lbs
60"	Rake/Clam	Dual	Universal	2,500 lbs
72"	Root	Dual	Universal	2,500 lbs
72"	Root	Dual	John Deere	2,500 lbs
72"	Rake/Clam	Dual	Universal	2,500 lbs
84"	Rake/Clam (Heavy Duty)	Dual	Universal	3,000 lbs

Hay Spears

Hay spears are heavy-duty tines that safely lift and move large hay bales, enabling quicker transport around the farm without damaging the bale.

Available Model: 3,000 lb. Capacity

- **49"** – Reinforced steel spear with standard skid steer quick attach mount

Landscape Rakes

Landscape rakes are used for spreading, smoothing, and removing rocks, sticks, or debris from soil. They're ideal for seedbed prep, gravel maintenance, and final clean-up, and connect easily to your 3-point hitch.

Available Sizes: *Spring-loaded tines let dirt pass through while catching debris.*

4 ft., 5 ft., and 6 ft. widths

Pallet Forks

Pallet forks are essential for lifting, moving, and stacking heavy loads like pallets, logs, and lumber on farms, in construction, and around the yard.

Standard Pallet Forks

Traditional frame with adjustable forks, available in various widths, capacities, and coupler types to suit your equipment and job needs.

Walkthrough Style

Open-top frame for better visibility and easier cab entry and exit. Typically has a universal coupler, but custom hook-ups are also available.

Width	Type	Hook-Up	Weight Rating
36"	Standard	Universal	2,200 lbs
36"	Standard	Dingo	2,200 lbs
36"	Standard	John Deere	2,200 lbs
36"	Walkthrough Style	Universal	2,200 lbs
42"	Standard	Universal	2,200 lbs
42"	Standard	Dingo	2,200 lbs
42"	Standard	John Deere	2,200 lbs
42"	Walkthrough Style	Universal	2,200 lbs
48"	Standard	Universal	2,200 lbs
48"	Standard	Dingo	2,200 lbs
48"	Standard	John Deere	2,200 lbs
48"	Walkthrough Style	Universal	2,200 lbs
48"	Standard	Universal	4,000 lbs
48"	Standard	John Deere	4,000 lbs
48"	Walkthrough Style	Universal	4,000 lbs

Scrape Blades

Scrape blades are straight blades that attach to your 3-point hitch. They're ideal for ditching, creating swales, clearing snow, and light grading work.

Available Sizes: *Some models may be angle-adjustable for more versatile grading.*
4 ft., 5 ft., and 6 ft. widths

Tooth Bars

Tooth bars attach to bucket edges to help dig into hard-packed soil.

Available Models:

- Tooth Bars:
 - 60" & Under
 - 72" to 96"
-

Trailer Movers

These tools allow your tractor or loader to double as a trailer mover, saving time and effort when repositioning trailers around farms, yards, or lots.

Available Models: 1,500 lb. Capacity

- **3-Point Trailer Mover** – Attaches to your tractor's 3-point hitch (Category 1 or 2)
 - **Front Trailer Mover** – Skid steer-compatible mount, standard 2" receiver hitch
-

Quick Connect Plates

Quick-attach plates (also known as quick-connect adapters) allow you to convert or fabricate attachments to fit specific couplers. These are useful for welders and equipment modifiers.

Available Models:

- Dingo Quick Connect Plate – Fits mini ride-on skid steers
- Tractor Quick Connect Plate – Universal plate compatible with most compact tractors and loaders

Compatibility Guidelines

Proper attachment compatibility ensures safe operation and maximizes performance. Before using an attachment, consider the following key factors:

1. Coupler System Types

Attachments must match the coupler type of your machine. Common coupler systems include:

- **Universal:** Standard quick-attach coupler for 45" skid steer hook-ups.
- **John Deere:** Specific to John Deere 400 & 500 series tractors and loaders.
- **Dingo:** Standard quick-attach coupler for 24" mini skid steer hook-ups.
- **3-Point Hitch:** Standard rear hook-up for most compact tractors and loaders.

2. Hydraulic Connection Basics

For powered attachments like grapples and hydraulic buckets, the hydraulic connection type must be compatible:

- **Flat Face Couplers:** Common on newer equipment for clean, low-spill connections.
- **Pioneer Couplers:** Traditional style, still widely used.

3. Machine Weight/Lift Rating vs. Attachment Capacity

The total weight of the attachment plus the load must stay within your machine's rated lift capacity. Check your machine's operator manual or placards for:

- Maximum lift capacity
- Hydraulic flow and pressure limits
- Tipping load and stability ratings

WARNING

Overloading or using incompatible attachments can result in tipping, mechanical damage, or serious injury. Follow these guidelines to protect yourself, your equipment, and your investment.

Compatibility Checklist

Before operating an attachment, confirm the following:

- The attachment is compatible with your machine's coupler type (e.g., skid steer universal, John Deere, Dingo, or 3-point hitch).
- Your machine's hydraulic flow (if applicable) meets the attachment's requirements.
- The combined weight of the attachment and material is within your machine's rated lift capacity.
- **Attachment Weight:**
 - Found in the product specifications or on your invoice.
- **Attachment Capacity:**
 - Provided in this document
 - Stamped on the attachment frame
 - Supplied by your dealer
- **Machine Capacity:**
 - Refer to machine placards and manuals for lift capacity, hydraulic specs, and tipping load.

WARNING

Overloading or using incompatible equipment can lead to tipping, mechanical failure, or serious injury.

Keep hydraulic connections debris-free to protect yourself, your equipment, and your attachment.

Always follow load ratings and machine guidelines to protect yourself, your equipment, and your attachment.

Weight Ratings and Load Capacity

Nolan Manufacturing attachments are built with quality materials and reinforced construction to meet or exceed typical working load expectations. However, safe use still depends on knowing and respecting the rated limits of both the attachment and the machine it's connected to.

Understand the Rated Load Capacity

Each attachment has a rated capacity based on its intended use, size, and design. Exceeding this capacity can cause structural damage or result in unsafe operation.

Load Rating = Attachment Design Capacity

The capacity rating assumes proper use and even weight distribution. Pallet forks, grapples, and blades—especially when paired with hydraulic lifting or pushing—must not be overloaded beyond their listed rating.

Know Your Equipment's Capabilities

It's not just about the attachment—your skid steer, tractor, or loader must also be rated to handle the load. Check your operator's manual or machine placard to confirm maximum lift capacity and hydraulic compatibility.

WARNING
An underrated machine can become unstable or suffer damage when paired with heavy-duty attachments.
Attachment weight + load capacity should not exceed machine specs.

Safe Operation Practices

Using tractor and skid steer attachments safely requires training, awareness, and attention to both the equipment and your surroundings. Always follow these safety guidelines to reduce the risk of injury or damage.

1. General Safety Rules

- Only trained and authorized individuals should operate machinery with attachments. Know how your equipment and attachments function before use.
- Always wear appropriate personal protective equipment (PPE), including:
 - Steel-toed boots
 - Gloves
 - Eye and ear protection
 - High-visibility clothing (when applicable)
- Review the owner's manuals for both your attachment and host equipment. Follow all safety instructions and warnings.

2. Hazard Awareness

- Attachments can present serious risks if used improperly. Always stay alert to these common hazards:
- Pinch Points: Keep hands, feet, and loose clothing away from joints, couplers, and moving parts.
- Tipping Hazards: Never exceed your equipment's rated lift or tilt capacity. Uneven loads or improper operation can cause rollover.
- Crushing Hazards: Stay clear of the area beneath raised attachments. Never allow others near while operating or maneuvering equipment.
- Unexpected Movement: Do not leave equipment unattended while running. Shut down and lower the attachment to the ground before exiting.

3. Pre-Use Safety Checklist

- Attachment is free of visible damage or excessive wear
- All pins, bolts, and connections are secure and tight
- Hydraulic lines (if applicable) are free of leaks and connected properly
- Quick-attach/connection points are locked in place
- Safety decals and warnings are legible
- The area is clear of bystanders and obstacles
- **Initial Setup & Inspections**
 - After the first few hours of use:
 - Inspect hardware and connection points for tightness.
 - Re-torque bolts and recheck pins as needed.
 - Regularly clean moving parts and inspect for wear, especially on high-stress implements like forks or grapples.

4. Proper Attachment and Detachment

- Only use attachments designed for your host machine's size, lift capacity, and coupler system (e.g., universal skid steer, 3-point hitch).
- Always double-check that the attachment is fully seated and locked into place. Listen for clicks or visually inspect safety pins and locks.
- **Hydraulic Hook-up** (if applicable):
 - Shut off the engine and relieve hydraulic pressure before connecting or disconnecting lines
 - Clean couplers before connection to prevent contamination
 - Confirm proper flow direction and avoid line twisting
- **Detaching Safely:**
 - Park on level ground
 - Lower the attachment fully to the ground
 - Shut off the machine before disconnecting
 - Store the attachment on a stable, supported surface to prevent tipping

WARNING

Improper use or installation of attachments can result in serious injury, death, or equipment damage. Always wear PPE, inspect equipment, and ensure secure connections before use. When in doubt, stop and consult your dealer.

Maintenance & Storage Guidelines

Proper care of your attachment helps prevent breakdowns, ensures safe operation, and extends its service life. Always perform maintenance with the attachment disconnected and securely supported.

Cleaning & Inspection

- Remove mud, debris, and corrosive materials (like fertilizer or salt) from surfaces after use.
- Inspect before each use and routinely for cracks, rust, bent parts, loose or worn tines/forks/spears, weld separations, and damaged hydraulic components (e.g., lines, cylinders, and couplers) if equipped.

Greasing & Lubrication

- Grease all moving or pivot points (e.g., grapples) with high-quality lithium-based grease unless otherwise specified.
- Typical intervals are every 10–20 hours of use or weekly.

Bolt & Fastener Maintenance

- Tighten all bolts and nuts regularly—especially on fork frames, tines, spear mounts, rake tines, scrape blades, and hydraulic fittings (if present).
- Re-torque after the first few hours of use and monthly thereafter.

Paint & Corrosion Protection

- Touch up chipped or worn paint promptly to prevent rust.
- Store indoors or under cover when possible.
- If outdoors, keep the attachment off the ground and under a breathable tarp.

Storage Tips

- Store attachments in a clean, dry area.
- Avoid prolonged exposure to moisture and corrosive materials.

WARNING

Failure to maintain your attachment can result in equipment failure, injury, or reduced service life. Always inspect before use.

Troubleshooting

Common Issues & Solutions

Basic troubleshooting can help identify and resolve common issues with your attachment. Always disconnect from the machine and relieve any hydraulic pressure before inspection or handling.

Forks Not Sitting Evenly

- Check if the tines are properly locked in position on the fork frame
- Inspect for bent or misaligned fork tines or mount slots
- Ensure the load is evenly distributed and positioned correctly

Grapple Won't Open/Close Fully

- Verify that hydraulic couplers are fully connected and not leaking
- Check for hydraulic line obstructions or debris in fittings
- Inspect for bent cylinder rods or misaligned grapple arms
- Confirm the skid steer/tractor auxiliary hydraulics are functioning correctly

Quick Attach Not Locking Properly

- Clean debris or rust from the attachment and coupler interface
- Inspect pins and levers for wear, damage, or misalignment
- Make sure the attachment is aligned squarely with the quick-attach plate

Spear or Tine Feels Loose

- Tighten mounting hardware
- Inspect for damaged mounts or cracked welds
- Recheck the torque after continued use

Hydraulic Attachment Doesn't Respond

- Confirm your machine's auxiliary hydraulics are turned on
- Relieve trapped pressure before connecting lines
- Check coupler connections for full engagement
- Inspect hoses for pinching, damage, or leaks

Operator Responsibilities

Using and maintaining your attachment correctly is your responsibility. Misuse or neglect may lead to injury, equipment failure, or a voided warranty.

Before Use

- Select the right attachment for the job and confirm compatibility with your machine (e.g., skid steer, compact tractor, Dingo).
- Ensure the rated capacity matches your intended load.
- Inspect for visible damage, loose hardware, or wear.
- Follow hook-up instructions and confirm all pins, locks, and couplers are secure.

During Operation

- Operate cautiously—especially around people, animals, or uneven terrain.
- Never exceed load ratings. Overloading can cause structural failure and serious injury.
- Use only as intended. Misuse may void the warranty.
- Do not exceed recommended operating speeds.
- Keep full control when lifting or moving loads, especially on slopes.
- Refer to your equipment's manual for safe speeds and hydraulic compatibility.

Maintenance

- Perform regular maintenance as outlined in “Maintenance & Storage Guidelines.”
- Log inspections and service in the Maintenance Log (Appendix A).
- Unmaintained attachments may become unsafe and lose warranty coverage.

WARNING

Failure to properly maintain or safely operate your attachment may result in injury, equipment failure, or loss of warranty coverage due to misuse or neglect.

Commonly Used Terms

NOTICE

This glossary provides definitions of commonly used non-technical terms relevant to Nolan Manufacturing attachments. It is intended to support user understanding of specifications, equipment features, and maintenance procedures referenced throughout this manual.

These definitions include terms used in manufacturing, operation, and safety of common attachments such as grapples, pallet forks, buckets, and landscape tools.

- **Attachment Capacity:** The maximum rated weight the attachment can safely handle, not to be exceeded under any condition.
- **Coupler:** The mechanical interface used to secure an attachment to the host machine. Includes skid steer quick attach, Euro/global, John Deere hook & pin, and Dingo mini universal types.
- **Cylinder (Hydraulic):** A hydraulic actuator used in attachments (like grapples) to create linear force and movement.
- **Flow Rating (Hydraulic):** The amount of hydraulic fluid a system or attachment is designed to handle, typically measured in gallons per minute (GPM).
- **GPM (Gallons Per Minute):** A measure of hydraulic flow capacity. It's critical to match attachment GPM ratings to your equipment.
- **Grease Fitting (Zerk):** A port on moving parts where grease is applied to reduce friction and wear.
- **Hose Guard:** Protective spiral or wrap installed around hydraulic hoses to reduce wear and damage.
- **Load Rating:** The maximum load that an attachment, or a part of it (like a tine or spear), can bear without risk of failure.
- **Lock Pins / Coupler Pins:** Pins used to secure attachments to the mounting plate or arms of the host machine.
- **Mounting Plate:** The interface plate on the attachment that matches your equipment's quick-attach system.
- **Operating Pressure:** The working hydraulic pressure (in PSI) needed for safe and effective function.

- Pivot Point: A location where parts of the attachment rotate or move; commonly seen in grapples and rakes.
- Quick Attach: A standardized mounting system allowing fast switching of attachments without tools.
- Rated Operating Capacity (ROC): The maximum load that the machine can safely lift and maneuver with an attachment.
- Return-to-Tank Line: A hydraulic hose line that directs fluid back to the machine's reservoir—essential for attachments with motor-driven features.
- Safety Lock: A mechanical or hydraulic feature that prevents accidental release of the attachment during operation.
- Skid Steer Compatibility: Indicates whether the attachment uses a standard skid steer quick-attach plate.
- Tine: The prong or fork arm used for lifting in attachments such as pallet forks, hay spears, or rakes.
- Torque: The twisting force applied to bolts or fittings, especially relevant for securing tines and hydraulic components.
- Wear Edge / Cutting Edge: The replaceable, high-wear part on the bottom edge of a bucket or blade that makes contact with the ground.

Disclaimer

Nolan Manufacturing, Inc. provides this manual for general reference and informational purposes only. It is intended to assist dealers in educating trailer users on safe operation and maintenance. This manual does not constitute legal advice and does not guarantee compliance with local, state, or federal laws. Dealers and users remain responsible for adhering to all applicable safety, registration, and operational regulations.

Nolan Manufacturing assumes no responsibility for any misuse or misinterpretation of the information contained in this manual. This includes, but is not limited to, any damage, injury, loss, or legal consequences arising from reliance on its contents. By distributing or using this manual, all parties—including dealers and end users—agree to release Nolan Manufacturing from any liability, claims, losses, or damages resulting from its use. Nolan Manufacturing makes no guarantees regarding the completeness, accuracy, or applicability of the information. The content of this manual is subject to change without notice, and Nolan Manufacturing reserves the right to update, revise, or replace this manual at any time without prior notification.

State and federal laws referenced in this manual may change at any time. Dealers and trailer users are responsible for verifying the latest regulations in the areas where the trailer is sold or operated.

Dealers are responsible for ensuring that end users receive all required safety information and documentation, and for advising them to comply with all relevant local, state, and federal regulations. This manual is not intended to be the sole source of safety guidance, regulatory compliance, or training.

While no formal operator certification is required, we recommend the following:

- Review safety and training videos provided by your tractor's manufacturer.
- Practice operations in a clear, open area before engaging in projects.
- Consult local extension offices or farm equipment centers for hands-on demonstrations.