



Shelf Truck

Assembly Instructions

Thank you for buying this North Star Truck. It has been engineered to ship quickly and inexpensively by UPS and requires assembly. When put together, you will have a sturdy, very versatile truck that will give you many years of service with little attention. Please follow these instructions carefully and in sequence, paying particular attention to anything that is underlined.

Minimum tools required for assembly:

Two 7/16" and two 9/16" open end wrenches.

(If available, ratchets and sockets will be helpful and much quicker.)

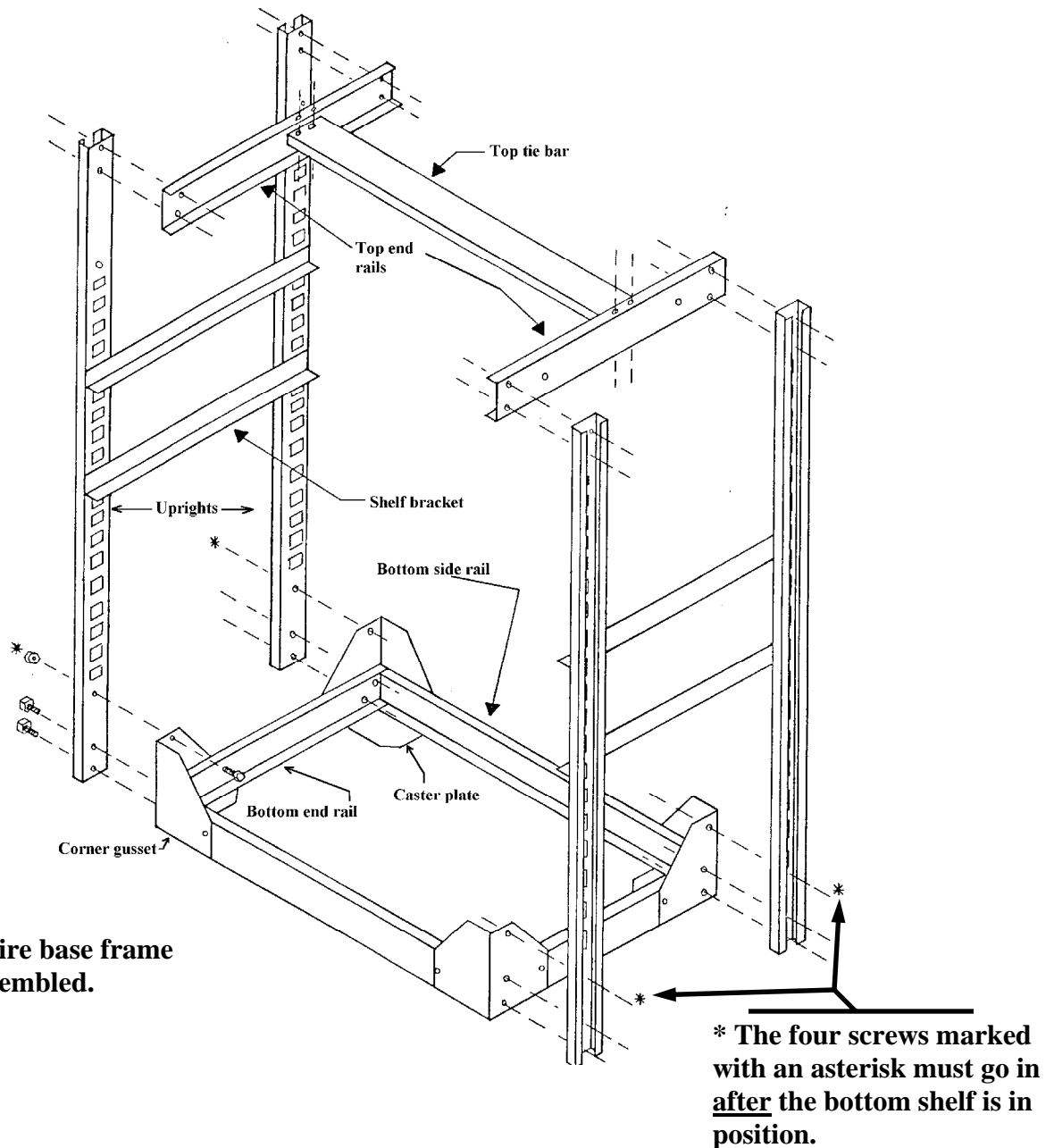
Time required: Less than 30 minutes.

Load capacity of this truck is 800 lbs.

Never exceed rated capacity!

Avoid top-heavy loads.

**STEP 1: Here is a sketch of what you are putting together.
Examine it to get an overview before you begin.**



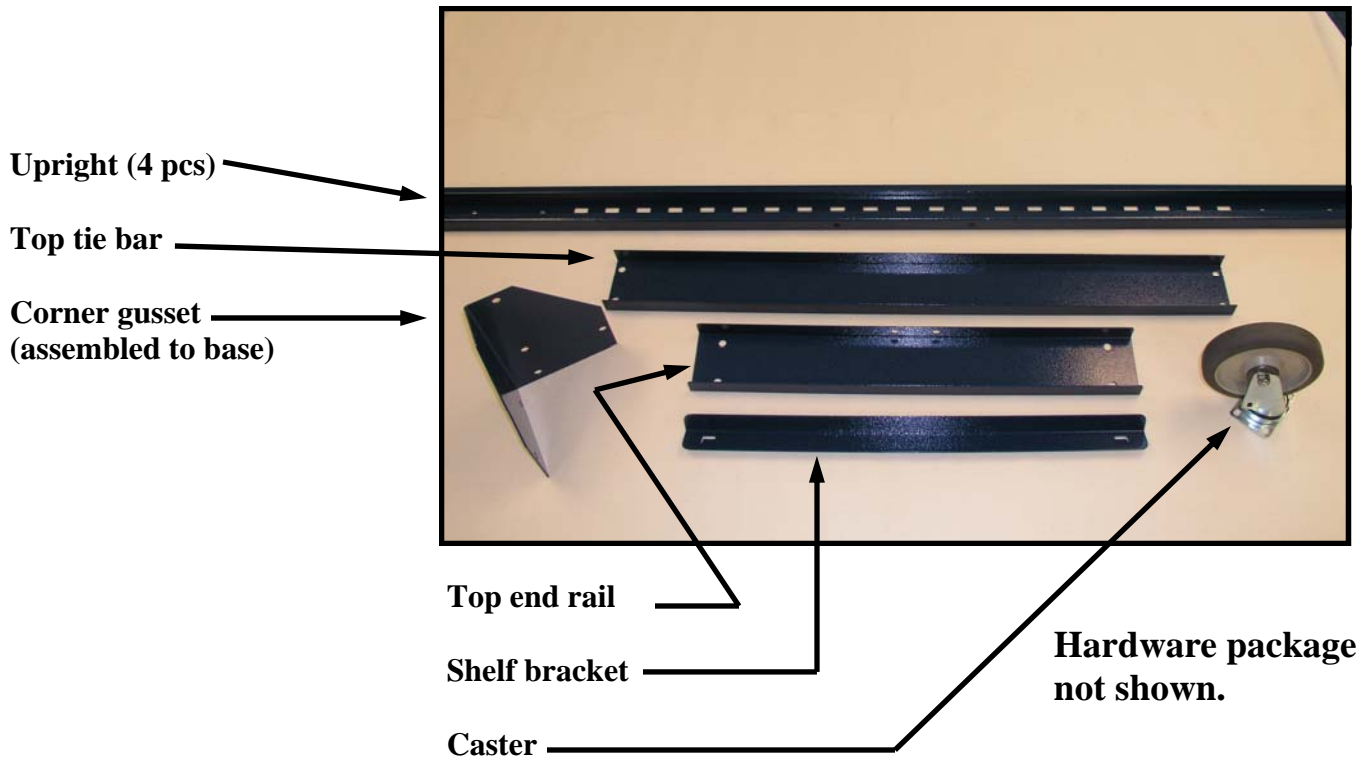
NOTE: The entire base frame has been preassembled.

Shelves

If you haven't purchased shelves with this truck, here is some information about making your own: Shelves can be cut from just about any sheet material such as plywood, particleboard, various honeycomb materials, etc. The thickness can be anything that suits your purposes up to 1½", but remember that shelves are supported only at the ends. This precludes very thin or flexible materials (usually anything less than ½"). The length will be 35¾". If you make your own, you have several choices as to width. Your decision will turn on how you handle and use them. They could be 24" wide and one shelf per layer or 12" wide with two per layer. If there is no danger of tilting, they can be wider than 24". In our own shop, we often use shelves that are 36" x 35¾". These overhang the cart by 6" on each side.

STEP 2: IDENTIFY ALL THE PARTS


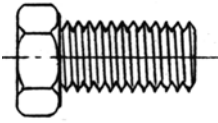

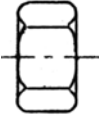
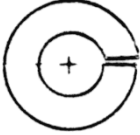

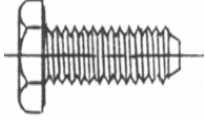

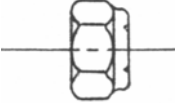
If you ordered the Shelf Truck alone you should have two cartons. The first, a large rectangular one, holds the assembled base. There is a small box inside it with the casters. The second long, narrow carton contains four uprights, two top end rails, one top tie bar, eight shelf brackets and the hardware package. If you ordered the Shelf Truck Package, a third carton will contain only a set of five shelves. Study the pictures and table below to make sure you have all parts. Preserve all packaging until you are sure everything is correct. If anything is missing or damaged, contact North Star Equipment directly.



PART NAME	NUMBER OF PIECES	IDENTIFYING CHARACTERISTICS	PART NUMBER	PRICE EACH
Base (not shown)	1	36" x 24" formed and welded	600-B	\$185.25
Upright section	4	Square holes	600-U	\$46.00
Top tie bar	1	36" long, 2 holes each end	604	\$18.75
Top end rail	2	24" long, 2 holes each end	603	\$18.50
Corner gusset	4	4 holes each leg	605	\$13.85
Caster with brake	2	Foot lever on side	690	\$15.55
Caster w/o brake	2	No foot lever	691	\$14.75
Shelf bracket	8	Rectangular lanced hole near each end	610	\$10.75/pr
Hardware package (not shown)		See next page for contents	N/A	\$12.50


STEP 3: THE HARDWARE PACKAGE

Identify the hardware and separate items according to the way each will be used. To help you, the pictures below are in the same scale and very close to actual size.

Top view	Side view	Description	Number	Used
		3/8-16 x 3/4" hex cap screw	24	with the following nuts and lockwashers to fasten uprights to base, top end rails to uprights and top tie bar to top end rails.
		3/8-16 hex nut for above screws	24	with above.
	N/A	3/8" lockwasher for above	24	with above.
		1/4-20 x 3/4" hex cap screw	16	with the following nut to secure casters to their mounting plates.
		1/4-20 nylock nut (lined inside with white nylon)	16	with the screw above.

NOTE: These items can be replaced at any hardware store. Standard nomenclature is given in the "Description" column.

BEFORE YOU GO FURTHER...

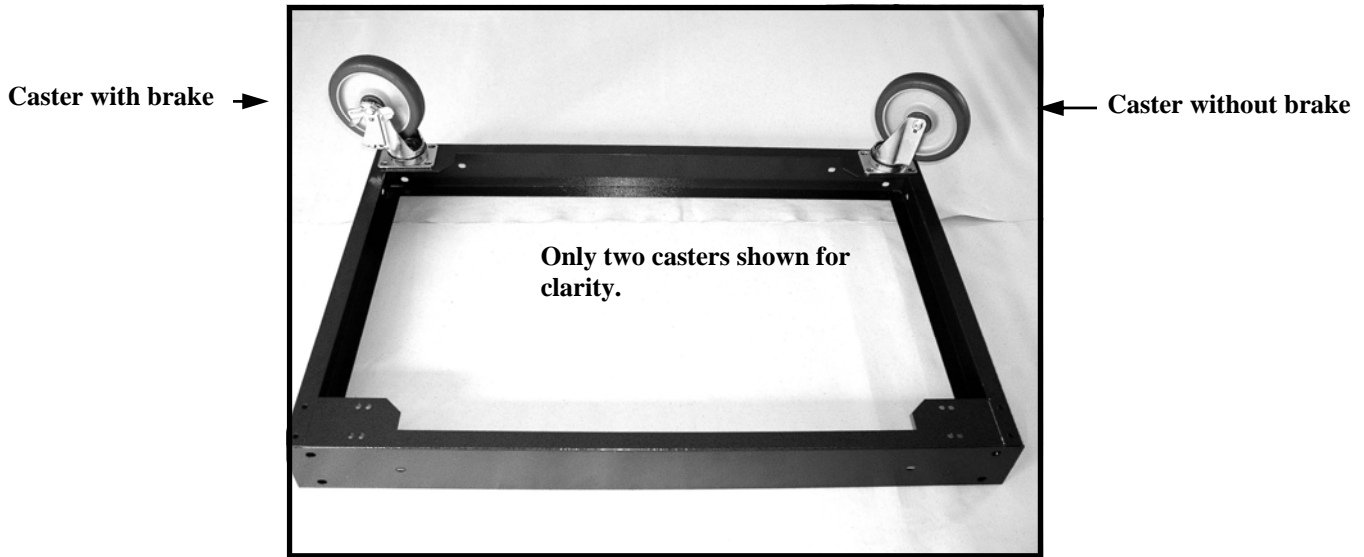
Some terminology and generalities will be helpful. Most of the parts that make up the truck are rails. When you look end-on at a rail, it looks like . The wide middle part in these instructions is called the "flat" and the narrow parts are "flanges". Also, your truck measures about 24" deep by 36" wide when assembled. In the following directions, "end" always refers to the 24" dimension and "side" always refers to the 36" dimension. "Top" and "bottom" are used as they will be when the truck is in use. "Bolt" and "screw" are used interchangeably.

Please follow these directions step by step. There are places where the sequence of inserting bolts or screws, for instance, makes an important difference. Note that washers always go under nuts, not under the heads of the screws (or bolts, if you prefer).

There is a small amount of tolerance or "play" in all holes. It is important to make sure they are exactly lined up when two or more parts overlap. You should also note that in all cases nuts and washers go toward the inside of the truck.

Step 4: Attach Casters to the Base

Turn the base over so that it is resting on the corner gussets.



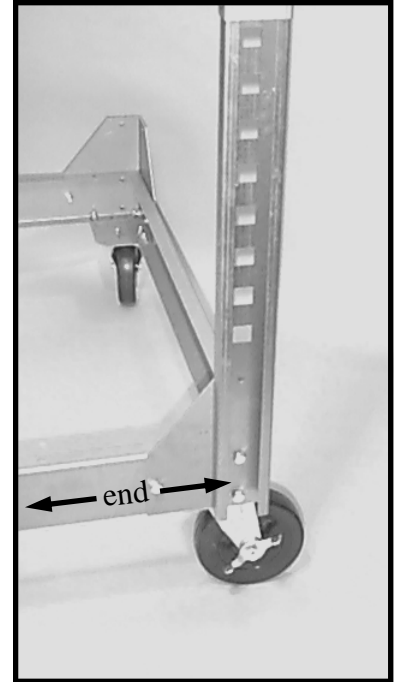
1. Put a caster at each corner. Two casters have brakes, two do not. Where you place them is your preference, but most users put the two with brakes at the same end.
2. Secure each caster with four of the smaller bolts and nylock nuts (see note below about these nuts). Two holes at each corner will not be used.
3. The heads of the bolts must be toward the wheels and the nuts must be on the inside of the truck. If the heads of the bolts are inside and the nuts toward the casters, the casters cannot swivel correctly.
4. Tighten firmly.

NOTE: If you are not familiar with nylock nuts, they have a nylon insert, which is plainly visible. Nylocks are used here because they almost never work free and these are in a location that will be hard to check for tightness. Start them by putting the end that does not have nylon showing against the bolt. The nut will turn quite easily the first few revolutions, then become harder as the bolt engages the nylon.

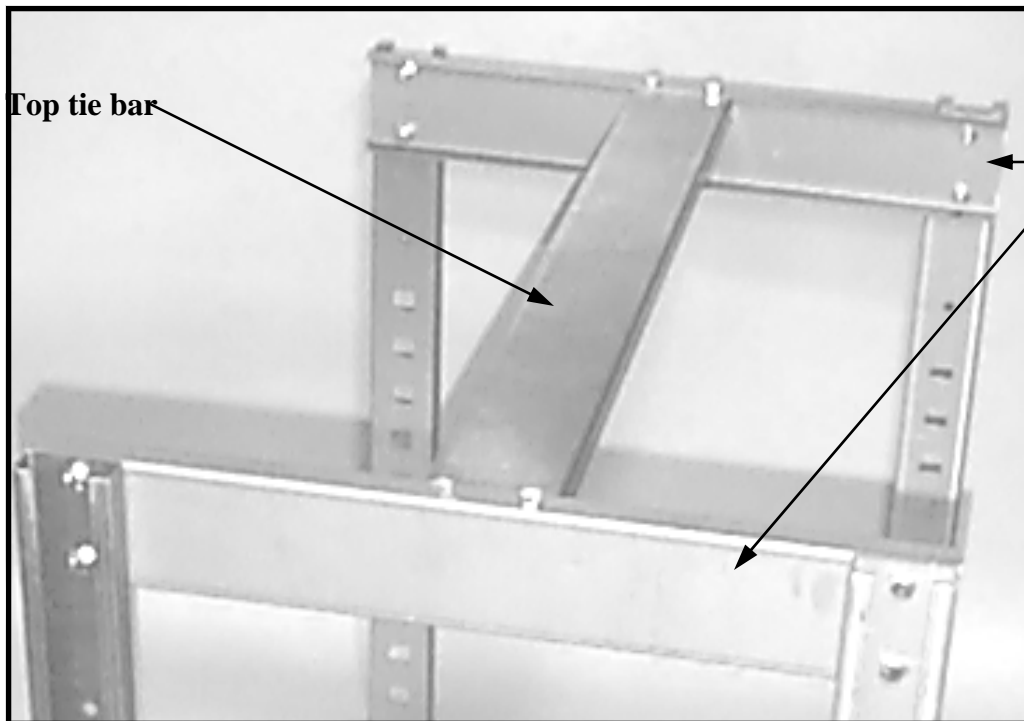
That's all for the base. It is now done!

Step 5: Attach the Shelf Frame to the Base

1. Refer to the illustration at right. Turn the base upright and lock the casters that have brakes by depressing one side of the brake lever with your foot.
2. Here it may be easier to have someone help you. At each corner gusset on the ends of the base frame you have three holes with no bolts in them. The corner uprights bolt on here, using only the bottom two holes at this time. This step uses 3/8 x 3/4" screws, nuts and washers.
3. Install one upright at each corner. Note that both ends of the uprights are the same, so "top" and "bottom" here don't make any difference. Get the bolts and nuts snug, but do not tighten them now.
4. Refer to the illustration below. Attach both top end rails to the inside top of the corner uprights. There are two holes in each end of the flat of the top end rails and two holes near the center of one flange. Flanges go toward the inside and center flange holes go up. Snug nuts, but do not tighten just yet.



5. Put the top tie bar in place and fasten. Note that the top tie bar is installed under the upper flanges of the end rails with the tie bar flanges pointing down. Do not tighten yet.



6. The flanges of the top tie bar point down. It goes under the the top flange of top end rails and the bolts go down, first through the top end rails and then through the tie bar.

Step 7: Square Truck and Tighten All Fasteners

Bolts and nuts usually hold the truck aligned. If it is "lopsided" lay it on its side in a corner of the room and use the two walls and floor as guides to get everything square. Now go back over the entire truck and tighten all nuts and bolts.

Step 8: Install Shelves

The bottom shelf rides directly on the base frame and is not adjustable. Simply lay one shelf in place on the base frame. Notice that there is now one bolt hole at each corner that has not yet been used. Insert a bolt from the outside through the upright and then through the corner gusset using the remaining hardware from Step 3. Put a lockwasher and nut on the inside. Tighten firmly. Shelf brackets now simply drop into any pair of square holes in the corner uprights (They must be firmly seated!) and the remaining shelves ride on them. Shelves may be placed in any desired position and shelf brackets may be moved at any time without the use of tools.

Maintenance

Keep casters free of abrasive dirt. Oil caster bearings once every three months (more often if used heavily) with any light machine oil. Once a month check all fasteners for tightness. The truck must be firm and rigid when in use.



CAUTIONS

Do not attempt to move more than 800 pounds on this truck

Avoid top-heavy loads

Make sure all fasteners are tight at all times

Never try to move truck with brakes on

All parts of this truck are guaranteed against defects in materials and workmanship for two years from date of purchase . Any defective part will be repaired or replaced at North Star's option immediately upon notice. Overloading voids warranty.

Made in U.S.A. by

North Star Equipment, Inc.

P.O. Box 189, Cheney, WA 99004

Phone numbers: (509) 235-9200 and (800) 231-7896

Fax numbers: (509) 235-9203 and (800) 447-3293



North Star Equipment Warranty Policy



July, 1997

This warranty covers all products shipped on and after July 1, 1997 with the exceptions noted below. It supersedes all previous warranty policies. Warranty terms, product design, specifications and prices subject to change without notice.

SLAB ROLLERS AND 4" EXTRUDERS: FULL NO-TIME-LIMIT PRODUCT WARRANTY

To make this warranty effective, the warranty registration card enclosed with the product must be completed and returned.

Your North Star Slab Roller or 4" Extruder is warranted to the original purchaser to be free of defects in materials and workmanship. This warranty will remain in effect for the life of the machine. We will repair or replace, at no cost to you, any part we find to be worn out or defective. This includes even parts that wear in normal use, such as bushings, spacers, gears and spring pins. Failures caused by abuse or use of the machine for other than its intended purpose are not covered. If it is necessary for the machine to come back to the factory for repairs (almost never required), you must pack it and prepay the shipping to North Star. It will be repaired or replaced at our option and returned to you at North Star's expense.

OTHER PRODUCTS

1. Standard series Slab Rollers used in a commercial or academic setting are warranted for 24 months from date of purchase only.
2. These products and components carry no warranty: Bats, canvas, tabletops, TableToppers, and Shelf Truck shelves.
3. The North Star Mold Press is warranted for 90 days only.
4. The Big Blue Extruder is warranted for two years from date of purchase.

DELIVERY WARRANTY

Delivery in good condition is guaranteed for every product, regardless of the carrier. Should shipping damage occur, have it noted on the freight bill and contact North Star for immediate repair or replacement. If the carrier is liable, North Star will pursue the claim.

MERCHANDISE RETURN PRIVILEGE

Any North Star product except custom items may within 10 days of receipt be returned for full refund less shipping charges if it is unsatisfactory in any way, provided it is complete with all parts and documentation, in new condition and in its original packing. No reason need be given. Should you wish to return an item, simply repack it and return it to the dealer from whom you bought it. Every dealer is authorized to refund your purchase price in full. If you bought it directly from the factory, a return authorization number (RAN) must be obtained from North Star (see "To Return A Product" below) and you must prepay return shipping.

HOW TO GET SERVICE FOR A NORTH STAR PRODUCT

Contact us by mail, phone or fax. If calling, have your telephone at the machine if possible. Be prepared to identify the model and describe the part or problem in detail. Over the past 25 years we have found that nearly every problem can be solved with a bit of advice or a simple repair part. If you need a part covered by warranty it will be shipped by Priority Mail and sent out within one working day.

IDENTIFYING YOUR PRODUCT

North Star products do not carry serial or model numbers. If you need to contact the factory for service, you will need to identify it so the proper parts can be located. To identify a Slab Roller correctly, you will need to provide two or three items of information about it:

1. The series ("Standard" or "Super" series)
Super series machines have 4" diameter rolls
Standard series rolls are 2½" in diameter
2. The length of the working surface of the rolls
3. If the problem is with a gear, the color of the gear

In the case of 4" extruders, you need to know only if it is a Stainless model (with a silver barrel) or Standard (blue barrel).

HOW TO CONTACT THE FACTORY IF YOU LIVE IN NORTH AMERICA

(CONTINENTAL U. S., ALASKA, HAWAII, PUERTO RICO, U.S. VIRGIN ISLANDS, ALL OF CANADA)

The factory toll-free telephone number is (800) 231-7896. Our offices are open from 8:00 to 5:00 PST Monday through Friday except major holidays. The toll-free fax number, in use 24 hours a day every day, is (800) 447-3293.

HOW TO CONTACT THE FACTORY IF YOU LIVE OUTSIDE NORTH AMERICA

The factory telephone is (509) 235-9200 and the fax number is (509) 235-9203. See the paragraph above for hours. Remember to add the country code for the United States and be sure to give us full information about the problem. Include name, address, phone and fax.

TO RETURN A COVERED PRODUCT FOR FACTORY REPAIRS

No merchandise will be accepted at the factory unless it has a Return Authorization Number (RAN) marked prominently on every carton.

Should a return be necessary, contact the factory for the shipping address, shipping instructions and an RAN. From the most distant point in the Continental United States a Standard Slab Roller can be shipped to the factory for less than \$20.00.

FACTORY REBUILDING OFFER

At any time, no matter how new or old your North Star product may be, North Star Equipment will rebuild and repaint it, replace every worn part and install all available updates for one third the current list price of that model or its equivalent (if that model has been changed). To take advantage of this offer, follow the return procedure in the paragraph above.



North Star Equipment Warranty & Service Information



**Be sure to fill out the online
warranty form at**



www.NorthStarEquipment.com

Your warranty is not in effect until the form has been received by North Star.



**Record the filing date below and retain this form
permanently.**

**The information enclosed supersedes all prior
warranty and service policies.**

September, 2003

Warranty registration form Filed on (date):

