

# Operating Instructions and Parts Manual 16 x 52 inch Foot Shear

Model FS-1652J





## 1.0 IMPORTANT SAFETY INSTRUCTIONS

READ ALL INSTRUCTIONS BEFORE USING THIS FOOT SHEAR.

## WARNING – To reduce the risk of injury:

- Read and understand the entire owner's manual before attempting assembly or operation.
- Read and understand the warnings posted on the machine and in this manual. Failure to comply with all of these warnings may cause serious injury.
- Replace the warning labels if they become obscured or removed.
- 4. This foot shear is designed and intended for use by properly trained and experienced personnel only. If you are not familiar with the proper and safe operation of a foot shear, do not use until proper training and knowledge have been obtained.
- Do not use this foot shear for other than its intended use. If used for other purposes, JET disclaims any real or implied warranty and holds itself harmless from any injury that may result from that use.
- Always wear ANSI Z87.1 approved safety glasses or face shield while using this foot shear. (Everyday eyeglasses only have impact resistant lenses; they are *not* safety glasses.)
- Before operating the foot shear, remove tie, rings, watches and other jewelry, and roll sleeves up past the elbows. Do not wear loose clothing. Confine long hair. Non-slip footwear or anti-skid floor strips are recommended.
- 8. Wear ear protectors (plugs or muffs) if noise reaches unsafe levels.
- Some dust created by power sanding, sawing, grinding, drilling and other construction activities contain chemicals known to cause cancer, birth defects or other reproductive harm. Some examples of these chemicals are:
  - Lead from lead based paint.
  - Crystalline silica from bricks, cement and other masonry products.
  - Arsenic and chromium from chemically treated lumber.

Your risk of exposure varies, depending on how often you do this type of work. To reduce your exposure to these chemicals, work in a well-ventilated area and work with approved safety equipment, such as face or dust masks that are specifically designed to filter out microscopic particles.

- Do not operate this machine while tired or under the influence of drugs, alcohol or any medication.
- 11. Keep safety guards in place at all times when the machine is in use. If removed for maintenance purposes, use extreme caution and replace the guards immediately after completion of maintenance.
- 12. Check damaged parts. Before further use of the machine, a guard or other part that is damaged should be carefully checked to determine that it will operate properly and perform its intended function. Check for alignment of moving parts, binding of moving parts, breakage of parts, mounting and any other conditions that may affect its operation. A guard or other part that is damaged should be properly repaired or replaced.
- 13. Provide for adequate space surrounding work area and non-glare, overhead lighting.
- 14. Keep the floor around the machine clean and free of scrap material, oil and grease.
- 15. Keep visitors a safe distance from the work area. Keep children away.
- 16. Make your workshop child proof with padlocks, master switches or by removing starter keys.
- 17. Give your work undivided attention. Looking around, carrying on a conversation and "horse-play" are careless acts that can result in serious injury.
- 18. Maintain a balanced stance at all times so that you do not fall into the blade or other moving parts. Do not overreach or use excessive force to perform any machine operation.
- 19. Use recommended accessories; improper accessories may be hazardous.
- Maintain tools with care. Keep blades sharp and clean for the best and safest performance.
   Follow instructions for lubricating and changing accessories.
- 21. Do not stand on the machine. Serious injury could occur if the machine tips over.
- 22. Remove loose items and unnecessary work pieces from the area before operating the machine.
- Keep hold-down clearance to table as small as possible while allowing just enough room to feed stock.

- 24. Do not cut rods with the foot shear.
- 25. Sheet metal stock has sharp edges; use caution when handling to prevent cuts.
- 26. Keep hands and fingers clear of the blade and hold-down area. Do not place hands or fingers between material and table when operating.
- 27. Do not exceed rated capacity of the foot shear.
- 28. Do not exceed front gauge capacity material must not be so long that it interferes in any way with safe operation of the foot pedal.

#### Familiarize yourself with the following safety notices used in this manual:

This means that if precautions are not heeded, it may result in minor injury and/or possible machine damage.

This means that if precautions are not heeded, it may result in serious, or possibly even fatal, injury.

#### SAVE THESE INSTRUCTIONS

#### 2.0 About this manual

This manual is provided by JET, covering the safe operation and maintenance procedures for a JET Model FS-1652T Foot Shear. This manual contains instructions on installation, safety precautions, general operating procedures, maintenance instructions and parts breakdown. Your machine has been designed and constructed to provide consistent, long-term operation if used in accordance with the instructions as set forth in this document.

If there are questions or comments, please contact your local supplier or JET. JET can also be reached at our web site: www.jettools.com.

Retain this manual for future reference. If the machine transfers ownership, the manual should accompany it.

**AWARNING**Read and understand the entire contents of this manual before attempting assembly or operation! Failure to comply may cause serious injury!

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## 4.0 Specifications

Model number	
Capacities:  Mild steel	52 in. (1321mm) 28 in. (710mm)
Blade features: Lower blade Upper blade	2 cutting edges with 2-degree edge relief 4 cutting edges with 2-degree edge reliefs
Primary materials: Frame Table Lower blade Upper blade Hold-down	cast iron, ground surface hardened stainless steel, 48~58HRC hardened stainless steel, 48~58HRC
Dimensions:  Overall dimensions, fully assembled (LxWxH)	62-1/4 x 72 in. (1580 x 1830mm)
Weights: Net weightShipping weight	

The specifications in this manual were current at time of publication, but because of our policy of continuous improvement, JET reserves the right to change specifications at any time and without prior notice, without incurring obligations.

## 5.0 Setup and assembly

AWARNING Read and understand all assembly instructions before attempting assembly. Failure to comply may cause serious injury.

#### 5.1 Shipping contents

See Figures 1 and 2.

- 1 Foot shear
- 2 Adjustment blocks A
- 1 Bevel gauge B
- 2 Extension arms C
- 2 Back stop rods D
- 1 Back stop E
- 1 Front stop F
- 3 Wing nuts G
- 4 Cotter pins H
- 4 Hex cap bolts, M12x45 I
- 4 Flat washers, wide, M12 J
- 2 Hex cap bolts, M10x20 K
- 2 Flat washers, M10 L
- 2 Long clevis pins M
- 4 Short clevis pins N
- 3 T-nuts O
- 3 Flat Washers, M12 P

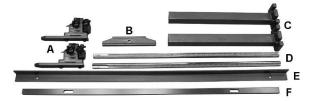
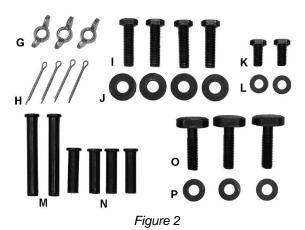


Figure 1



#### 5.2 Tools required for assembly

16mm and 19mm wrenches

#### 5.3 Unpacking and cleanup

 Remove crating from around machine. Inspect contents for shipping damage. Report damage, or any missing parts, to your distributor. Do not

- discard packing material until shear is assembled and operating satisfactorily.
- Remove bolts holding machine to pallet. Use hoist, forklift, or similar means to lift shear off pallet and move to desired location.
- Carefully move machine to a level foundation. Machine location must allow access to all sides. Secure shear to floor using lag screws (not provided) or other appropriate fasteners.
- 4. Remove any protective straps from around machine, and carefully clean all rust protected surfaces with a mild solvent or kerosene and a soft rag. Do not use lacquer thinner, paint thinner, or gasoline, as these will damage painted surfaces. Use caution when cleaning around blade area.
- Coat all machined surfaces with a light coat of oil to inhibit rust. Paste wax may be used on the exposed table surface.

**Assembly Note:** Prior to shipment the foot shear is adjusted by the manufacturer for proper operation. If the machine does not operate properly, or the stand does not sit squarely on the floor, refer to sect. 6.2, Table/side panel adjustment.

#### 5.4 Extension arms and front stop

- 1. Install four hex cap bolts and washers (I/J, Figure 3) loosely into front table edge.
- 2. Slide extension arm (C) onto bolts, leaving extension arm slightly above table surface. Make bolts snug, and tap down extension arm until level with table surface. Tighten bolts firmly. Repeat for other extension arm.

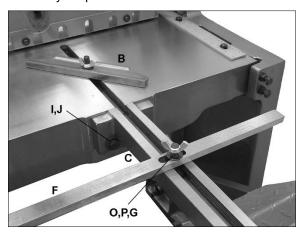


Figure 3

 Install T-nuts, flat washers and wing nuts (O,P,G) to bevel gauge (B) and front stop (F), and slide them into the channels.

#### 5.5 Back stop

 Insert rod (D, Figure 4) through adjustment block (A) and into frame. Make sure both rods are inserted an even amount into the frame. Tighten securely in place with screw (D<sub>1</sub>).  Attach back stop (E) to adjustment block flange with M10 screw and flat washer (K,L) from underneath.

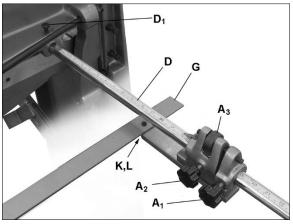


Figure 4

## 6.0 Adjustments

#### 6.1 Back stop adjustment

- To position back stops, loosen all knobs (A<sub>1</sub>,A<sub>2</sub>, Figure 4) and slide adjustment blocks close to desired position on scale.
- 2. Tighten knob  $(A_1)$  and rotate dial  $(A_3)$  to adjust to final position.
- 3. Tighten remaining knobs (A<sub>2</sub>).

#### 6.2 Table/side panel adjustment

If floor is level but shear does not sit evenly, adjust as follows:

- Loosen two bolts (R, Figure 5) on each side of shear.
- Loosen hex nuts and bolts (S, Figure 5). Table
  must rest squarely on right and left side panels
  at all four corners while screws are loose. Shim
  legs at floor if necessary.
- Securely tighten bolts and hex nuts (R,S) when adjustments are complete.

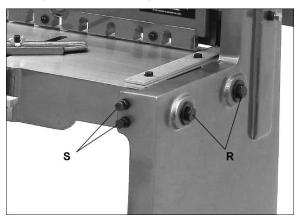


Figure 5

#### 6.3 Blade clearance adjustment

Blade clearance has been adjusted by the manufacturer for the gauge capacity of the shear. If the shear does not cut properly during operations, identify the specific problem: Place heavy sheet of paper (such as brown craft paper approximately 0.005 in. thick) in cutting position, along entire length of table. Slowly press foot lever.

If shear does not cut paper: Move lower blade toward upper blade. Slightly loosen bolts (R, Figure 5) and loosen hex nuts and turn bolts (S, Figure 5) to move lower blade toward upper blade. Distance between upper and lower blades should be 0.002 to 0.005 inches. Do **NOT** let blades overlap.

Repeat test cut of paper. When satisfied, tighten hex nuts (S, Figure 5) and bolts (R, Figure 5).

If shear cuts paper on the ends, but not the center: Loosen hex nut and turn tie-rod adjusting screw (Figure 6) *clockwise*, as viewed from back, until paper is cut the entire length. Retighten hex nut against frame.

If shear cuts paper in the center, but not the ends: Loosen hex nut and turn tie-rod adjusting screw (Figure 6), counter-clockwise until paper is cut the entire length. Retighten hex nut against frame.



Figure 6

Make sure scales on table top are square to blade, and also show correct distance from blade. Make test cuts to verify that scales are correct. If adjustment is needed, loosen bolts and shift scales as needed. Retighten bolts before operating.

## 7.0 **Operation**

1. Slide material beneath hold-down and against back stop and side stops or bevel gauge.

Do not place hands between material and table while operating shear.

- 2. Press foot lever all the way down until cutting action is complete.
- 3. Release foot lever, which will rise to original position.

#### 8.0 User-maintenance

Lubricate all pivot points on machine daily.

Periodically apply light coat of paste wax, or other commercial protectant, to table surface.

Additional clevis and cotter pins are provided with the foot shear, should installed ones need replacing due to wear or shearing.

#### 8.1 Spring tension

The Foot lever spring return can be adjusted by tightening hex nuts (#47, exploded view).

The spring return can be adjusted on the hold-down by turning hex nuts (#10, exploded view).

#### 8.2 Gib adjustment

Three gib screws (#32, exploded view) can be adjusted for play in each shim. Adjust for smooth travel.

#### 8.3 Blade care

ACAUTION Use thick gloves when handling shear blades.

Wipe blade lightly with oil after use.

Upper blade is 4-way, and can be removed and flipped for a sharp edge three times before requiring sharpening.

Bottom blade is 2-way and can be flipped once for a sharp edge before requiring sharpening.

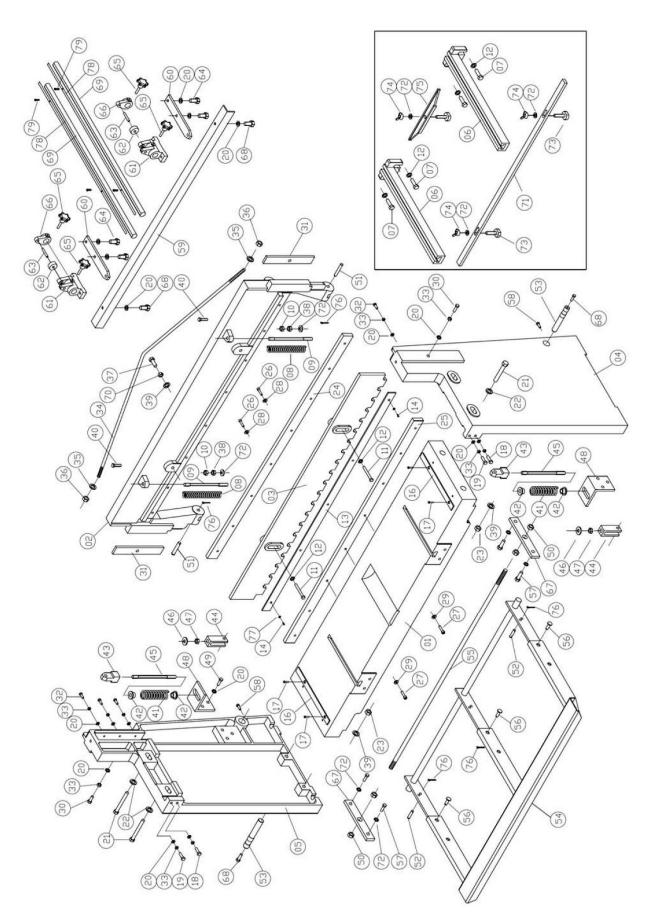
## 9.0 Troubleshooting FS-1652T Foot Shear

Symptom	Possible Cause	Correction	
Burrs on sheared edge.	Low quality materials.	Use better grade steel.	
	Dull blade(s).	Turn or sharpen blade(s).	
	Incorrect blade clearance, excessive gap between blades.	Adjust blades closer.	
	Gibs out of adjustment.	Tighten gibs.	
Won't cut material, or cuts with difficulty.	Material exceeds machine capacity.	Use proper gauge material.	
	Dull blade(s).	Turn or sharpen blade(s).	
	Incorrect blade clearance, excessive gap between blades.	Adjust blades closer.	
Stock shifts while cutting.	Insufficient hold-down pressure.	Increase spring pressure of hold-down.	
	Dull blade(s).	Turn or sharpen blade(s).	
	Lower blade not even with table surface.	Adjust blade; use shims if blade has been reground.	
Cuts not square.	Insufficient hold-down pressure.	Increase spring pressure of hold-down.	
	Unequal blade gap across length of blade.	Adjust for equal blade gap.	
	Uneven contact with guides.	Place material evenly against guides.	
	Blade is bowed.	Replace blade.	

## 10.0 Replacement Parts

Replacement parts are listed on the following pages. To order parts or reach our service department, call 1-800-274-6848 Monday through Friday, 8:00 a.m. to 5:00 p.m. CST. Having the Model Number and Serial Number of your machine available when you call will allow us to serve you quickly and accurately.

## 10.1.1 Exploded View: FS-1652J Foot Shear



### 10.1.2 Parts List: FS-1652J Foot Shear

Index No	Part No	Description	Size	Qty
1	FS1652J-01	Table		1
		Cutter Bar		
3	FS1652J-03	Hold Down		1
4	FS1652J-04	R.H. Side Panel		1
		L.H. Side Panel		
		Front Extension Arm		
		Hex Cap Bolt		
		Spring		
		Stud		
		Cap Nut		
		Hex Cap Bolt		
		Flat Washer		
13	FS1652J-13	Finger Guard	I ZAZZ IAZIO IIIII IIII	1
		Pan Head Machine Screw		
		Table Scale		
		Hex Cap Bolt		
		Hex Cap Bolt		
		Hex Cap Bolt		
		Flat Washer		
		Bolt		
		Washer		
		Hex Nut		
		Upper Knife		
		Lower Knife		
		Socket Head Cap Screw		
		Socket Head Cap Screw		
		Flat Washer		
		Flat Washer		
		Hex Cap Screw (Copper)		
		Gib		
		Hex Cap Bolt		
		Hex Nut		
		Rod		
		Washer		
		Hex Nut		
		Special Screw		
		Hex Nut		
		Flat Washer		
		Hex Cap Bolt		
		Spring		
		Spring Cap		
		Swivel Top		
		Swivel Bottom		
		Stud		
		Flat Washer		
		Hex Nut		
48	FS1652J-48	Bracket		2
49	F008836	Hex Cap Bolt	M10-1.5x25	6
50	F003091	Hex Nut	M20-2.5	4
51	FS1652J-51	Pin	Ø12x85 mm	4
		Clevis Pin		
		Brake Pin		
		Pedal Assembly		
		Connection Bar		
		Clevis Pin		
		Hex Cap Bolt		
		Hex Cap Bolt		
		Back Stop		
		Extension Bar		
		Adjusting Block		
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Index No	Part No	Description	Size	Qty
62	FS1652J-62	. Adjusting Dial		2
		. Adjusting Screw		
64	F009498	. Hex Cap Bolt	M10-1.5x30	4
		. Knob		
66	FS1652J-66	. Adjusting Bracket		2
67	FS1652J-67	. Plate		2
68	F008832	. Hex Cap Bolt	M10-1.5x20	4
		. Back Stop Rod Assembly (#69, #78, #79)		
69	FS1652J-69	. Back Stop Rod		2
		. Hex Nut		
		. Front Stop		
		. Flat Washer		
		. "T" Bolt		
		. Wing Nut		
		. Angle Gauge		
		. Cotter Pin		
77	F002636	. Flat Washer	ø6xØ12x1.6 mm	5
		. Scale		
		. Rivet		
		. ID Label, FS-1652J (not shown)		
		. Label – Gauge Capacities (not shown)		
		. Warning Label (not shown)		
	JET-165	. JET Logo with adhesive (not shown)	165x68mm	1

Some parts are shown for reference only, and may not be available individually. Non-proprietary parts, such as fasteners, can usually be found at local hardware stores, or may be ordered from JET.

## 11.0 Warranty and service

JET warrants every product it sells against manufacturers' defects. If one of our tools needs service or repair, please contact Technical Service by calling 1-800-274-6846, 8AM to 5PM CST, Monday through Friday.

#### **Warranty Period**

The general warranty lasts for the time period specified in the literature included with your product or on the official JET branded website.

- JET products carry a limited warranty which varies in duration based upon the product. (See chart below)
- Accessories carry a limited warranty of one year from the date of receipt.
- Consumable items are defined as expendable parts or accessories expected to become inoperable within a reasonable amount of use and are covered by a 90 day limited warranty against manufacturer's defects.

#### Who is Covered

This warranty covers only the initial purchaser of the product from the date of delivery.

#### What is Covered

This warranty covers any defects in workmanship or materials subject to the limitations stated below. This warranty does not cover failures due directly or indirectly to misuse, abuse, negligence or accidents, normal wear-and-tear, improper repair, alterations or lack of maintenance. JET woodworking machinery is designed to be used with Wood. Use of these machines in the processing of metal, plastics, or other materials outside recommended guidelines may void the warranty. The exceptions are acrylics and other natural items that are made specifically for wood turning.

#### **Warranty Limitations**

Woodworking products with a Five Year Warranty that are used for commercial or industrial purposes default to a Two Year Warranty. Please contact Technical Service at 1-800-274-6846 for further clarification.

#### **How to Get Technical Support**

Please contact Technical Service by calling 1-800-274-6846. Please note that you will be asked to provide proof of initial purchase when calling. If a product requires further inspection, the Technical Service representative will explain and assist with any additional action needed. JET has Authorized Service Centers located throughout the United States. For the name of an Authorized Service Center in your area call 1-800-274-6846 or use the Service Center Locator on the JET website.

#### More Information

JET is constantly adding new products. For complete, up-to-date product information, check with your local distributor or visit the JET website.

#### **How State Law Applies**

This warranty gives you specific legal rights, subject to applicable state law.

#### **Limitations on This Warranty**

JET LIMITS ALL IMPLIED WARRANTIES TO THE PERIOD OF THE LIMITED WARRANTY FOR EACH PRODUCT. EXCEPT AS STATED HEREIN, ANY IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE EXCLUDED. SOME STATES DO NOT ALLOW LIMITATIONS ON HOW LONG AN IMPLIED WARRANTY LASTS, SO THE ABOVE LIMITATION MAY NOT APPLY TO YOU. JET SHALL IN NO EVENT BE LIABLE FOR DEATH, INJURIES TO PERSONS OR PROPERTY, OR FOR INCIDENTAL, CONTINGENT, SPECIAL, OR CONSEQUENTIAL DAMAGES ARISING FROM THE USE OF OUR PRODUCTS. SOME STATES DO NOT ALLOW THE EXCLUSION OR LIMITATION OF INCIDENTAL OR CONSEQUENTIAL DAMAGES, SO THE ABOVE LIMITATION OR EXCLUSION MAY NOT APPLY TO YOU.

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#### **Product Listing with Warranty Period**

90 Days - Parts; Consumable items

1 Year - Motors; Machine Accessories

2 Year – Metalworking Machinery; Electric Hoists, Electric Hoist Accessories; Woodworking Machinery used for industrial or commercial purposes

5 Year – Woodworking Machinery

Limited Lifetime – JET Parallel clamps; VOLT Series Electric Hoists; Manual Hoists; Manual Hoist Accessories; Shop Tools; Warehouse & Dock products; Hand Tools; Air Tools

NOTE: JET is a division of JPW Industries, Inc. References in this document to JET also apply to JPW Industries, Inc., or any of its successors in interest to the JET brand.