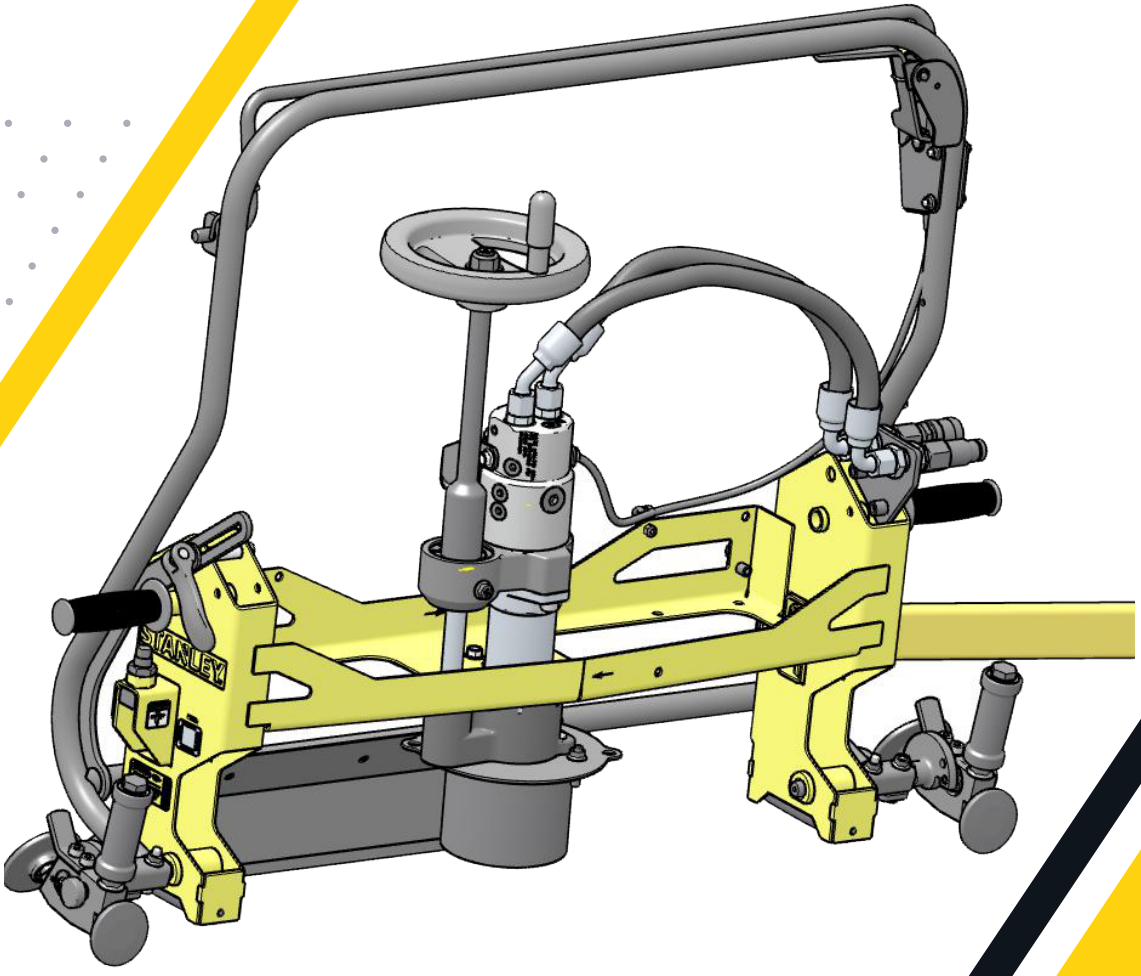
STANLEY®

OPERATOR'S MANUAL



HYDRAULIC FROG GRINDER

FG11

Original Instructions

MADE IN U.S.A. WITH GLOBAL MATERIALS™

Manual Number: 88887
Date: May 2025
Rev. 3

503-659-5600 | 3810 SE Naef Road, Milwaukie, OR 97267, United States of America |

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Table of Contents

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Preface

General Comments

Congratulations on the purchase of your new product! This product was carefully designed and manufactured to give you many years of dependable service. Only minor maintenance (such as cleaning and lubricating) is required to keep it in top working condition. Be sure to observe all maintenance procedures and safety precautions in this manual and on any safety decals located on the product and on any equipment on which the product is used with.

This manual has been designed to help you do a better, safer job. Read this manual carefully and become familiar with it's contents.

⚠ WARNING!

Never let anyone operate this unit without reading the "Safety Precautions" and "Operating Instructions" sections of this manual.

Unless noted otherwise, right and left sides are determined from the operator's control position when facing forward.

IMPORTANT

The illustrations and data used in this manual were current (according to the information available to us) at the time of printing, however, we reserve the right to redesign and change the product as may be necessary without notification.

Before Operation

The primary responsibility for safety with this equipment falls to the operator. Make sure the equipment is operated only by trained individuals that have read and understand this manual. If there is any portion of this manual or function you do not understand, contact your local authorized dealer or the manufacturer to obtain further assistance. Keep this manual available for reference. Provide the manual to any new owners and/or operators.

Safety Alert Symbol

This is the "Safety Alert Symbol" used by this industry. This symbol is used to warn of possible injury. Be sure to read all warnings carefully. They are included for your safety and for the safety of others working with you.

Service

Use only manufacturer replacement parts. Substitute parts may not meet the required standards.

Record the model and serial number of your unit on the cover of this manual. The parts department needs this information to insure that you receive the correct parts.

Sound And Vibration

Sound pressure levels and vibration data for this attachment are influenced by many different parameters: some items are listed below (not inclusive):

- prime mover type, age, condition, with or without cab enclosure and configuration
- operator training, behavior, stress level
- job site organization, working material condition, environment

Based on the uncertainty of the prime mover, operator, and job site, it is not possible to get precise machine and operator sound pressure levels or vibration levels for this attachment.

Safety Statements

THIS SYMBOL BY ITSELF OR WITH A WARNING WORD THROUGHOUT THIS MANUAL IS USED TO CALL YOUR ATTENTION TO INSTRUCTIONS INVOLVING YOUR PERSONAL SAFETY OR THE SAFETY OF OTHERS. FAILURE TO FOLLOW THESE INSTRUCTIONS CAN RESULT IN INJURY OR DEATH.

DANGER! INDICATES A HAZARDOUS SITUATION WHICH, IF NOT AVOIDED, WILL RESULT IN DEATH OR SERIOUS INJURY

WARNING! INDICATES A HAZARDOUS SITUATION WHICH, IF NOT AVOIDED, COULD RESULT IN DEATH OR SERIOUS INJURY

CAUTION! INDICATES A HAZARDOUS SITUATION WHICH, IF NOT AVOIDED, COULD RESULT IN MINOR OR MODERATE INJURY

NOTICE NOTICE IS USED TO ADDRESS PRACTICES NOT RELATED TO PHYSICAL INJURY.

General Safety Precautions

WARNING!

READ AND UNDERSTAND MANUAL

- Read and understand this manual and other safety information provided with this equipment and base machine (prime mover) and be sure all controls and instructions are understood before attempting to install, operate or maintain this equipment.
- Read and follow all safety warnings and instructions.
- Do not discard safety instructions. Give to the operator.
- Improper installation, operation or maintenance of this equipment could result in serious injury, death or property damage.

READ AND UNDERSTAND ALL SAFETY STATEMENTS

- Read all safety statements in this manual and on your equipment safety decals.
- Keep safety decals in good condition. Replace missing or damaged safety decals.
- Because the manufacturer cannot foresee all hazardous circumstances, the precautions listed in this manual and on the equipment are not all-inclusive. If a procedure, method, tool or part is not specifically recommended by the manufacturer, determine whether it is safe for you and others, and that the equipment will not be damaged or made unsafe as a result of your decision to implement it.

PERSONAL PROTECTIVE EQUIPMENT (PPE)

- **Always wear personal protective equipment (PPE) appropriate for the job, such as eye protection, ear protection, gloves, head protection, breathing protection and safety shoes. PPE should be worn at all times when operating, maintaining or observing the tool.**
- **Use PPE that conforms to standards ANSI Z87.1 (Eye and Face Protection), ANSI Z89.1 (Head Protection), ANSI Z41.1 (Foot Protection) and ANSI S12.6 (S3.19) (Hearing Protection).**


M003
Wear Ear Protection


M004
Wear Eye Protection


M016
Wear a Mask

- **Do not wear loose fitting clothing, jewelry, long hair or gloves with cut or frayed fingers. These items can become entangled in the equipment causing hazards such as choking, scalping, lacerations, severed or broken appendages.**

KNOW YOUR EQUIPMENT

- **Know your equipment's capabilities, dimensions, and controls before operating.**
- **Do not operate a damaged, improperly adjusted, modified or incompletely assembled tool.**
- **Make sure all safety guards and devices are installed.**
- **Check all hardware to ensure it is tight.**
- **Make certain that all locking pins, latches, and connection devices are properly installed and secured.**
- **Remove and replace any damaged, fatigued, or excessively worn parts.**
- **Inspect the tool before each use and ensure all safety decals are in place and legible. Contact manufacturer if replacement decals are needed.**
- **Know and follow good work practices when assembling, maintaining, repairing, mounting, removing or operating this equipment.**

SAFELY OPERATE EQUIPMENT

- **Establish a training program for all operators to ensure safe operation.**
- **Do not operate the tool unless thoroughly trained or under the supervision of a qualified operator or instructor.**
- **Know and obey all OSHA regulations, local laws, and other professional guidelines for your operation.**
- **Know your work site safety rules. When in doubt on any safety issue, contact your supervisor or safety coordinator.**
- **Assess hazards to yourself and others around you before operating the tool. Start in a work area without bystanders. A hazard to bystanders can include, but is not limited to, the risk of serious injury or death caused by the tool or accessories being dropped from an elevated height. Keep children out of the work area.**
- **Do not operate the equipment from anywhere other than the correct operator's position.**
- **Do not alter or remove any safety feature from the prime mover or tool.**
- **Stay alert, watch what you are doing and use common sense when operating the tool. Do not operate the tool if you are tired or under the influence of drugs, alcohol or medication. A moment of inattention while operating the tool may result in serious**

injury.

CALIFORNIA PROPOSITION 65 WARNING

- This product may contain a chemical known to the State of California to cause cancer, or birth defects or other reproductive harm. www.P65Warnings.ca.gov

DUST AND FUMES

- WARNING: Dust created by power sanding, sawing, grinding, drilling, and other job site activities may contain chemicals known to cause cancer, birth defects or other reproductive harm. Some examples of these chemicals are:

  - Lead from lead-based paints
  - Crystalline silica from quartz, bricks, cement and other masonry products
  - Arsenic and chromium from chemically-treated lumber

- To reduce your exposure to these chemicals: work in a well ventilated area and work with approved safety equipment, such as dust masks that are specially designed to filter out microscopic particles. Protect yourself and those around you.
- Research and understand materials you are working with.
- Follow correct safety procedures and comply with all applicable national, state or provisional health and safety regulations relating to them, including, if appropriate, arranging for the safe disposal of the materials by a qualified person.
- Use dust suppression or dust collection methods when using a tool that may cause high levels of dust.

  - Control dust or fumes at the point of emission.
  - Direct tool exhaust to minimize disturbance of dust.
  - Operate and maintain the tool as recommended in this manual to minimize dust.
  - Use respiratory protection in accordance with employers instruction or as required by occupational health and safety regulations.
  - Avoid prolonged contact with dust. Allowing dust to get into your mouth, eyes or on the skin may promote absorption of harmful chemicals.

SAFELY MAINTAIN AND REPAIR EQUIPMENT

- Work in a clean and dry area.
- Keep the work area well lit.
- Work on a level surface.
- Use properly grounded electrical outlets and tools.
- Use the correct tools for the job at hand.
- Ensure tools are working properly and safely by performing preventative maintenance procedures.
- Wear protective equipment specified by the tool manufacturer.
- Do not perform any work on the tool unless you are authorized and qualified to do so. Always read the operator service manuals before any repair is made.

- **After completing maintenance or repair, remove all maintenance tools and unused parts from equipment.**
- **Check for correct operation of the tool. If not operating properly, shut down the prime mover, follow proper Lock-Out / Tag-Out procedures and tag "DO NOT OPERATE" until all problems are corrected.**

USE CARE WITH HYDRAULIC FLUID PRESSURE

- **DO NOT attempt to make repairs to hydraulic lines or components while the system is pressurized. Hydraulic fluid under pressure can penetrate the skin and cause serious injury or death. Follow proper procedures for relieving pressure from hydraulic system before connecting of disconnecting hydraulic lines or components.**

- **Wear personal protective equipment (PPE) such as safety glasses, gloves and protective clothing at all times.**
- **Hydraulic leaks under pressure may not be easily visible. Keep hands and other body parts away from a suspected leak. Flesh injected with hydraulic fluid may develop gangrene or other permanent disabilities. Use a piece of cardboard or wood when searching for hydraulic leaks.**
- **If injured by injected fluid, seek immediate medical attention.**
- **Hydraulic fluid can become hot during operation. DO NOT come in contact with hot hydraulic fluid as it could cause severe burns.**
- **If exposed to hydraulic fluid, wash hands immediately.**
- **Inspect and clean couplers before use. Replace damaged couplers immediately.**
- **Ensure the couplers are properly connected and are tight.**
- **Do not smoke while working on the hydraulic system.**

DO NOT MISUSE OR MODIFY EQUIPMENT

- **Use and maintain the tool as stated in this manual. Misuse of the tool can cause serious injury.**
- **Do not modify the tool in any way. Modifications may weaken its integrity and may impair its function, safety, life and performance. When making repairs use only factory recommended replacement parts, following authorized instructions. Use of parts that are not factory approved may be substandard in fit and quality and may cause damage and void the warranty.**
- **Do not modify any ROPS (Roll Over Protective Structure) or FOPS (Falling Object Protective Structure) equipment or device. Any modifications must be authorized in writing by the manufacturer.**

END OF LIFE DISPOSAL

- **At the completion of the useful life of the unit, drain all fluids and dismantle by separating the different materials (rubber, steel, plastic, etc.). Follow all federal, state and local regulations for recycling and disposal of the fluid and components.**

Equipment Safety Precautions

⚠ WARNING!

READ THE RAIL GRINDER MANUAL

- ***WARNING:*** **Read all safety warnings and instructions. Failure to follow warnings and instructions may result in tool damage and/or serious injury.**

- **Always observe safety symbols. They are included for your safety and for the protection of the tool.**
- ***WARNING:*** **To reduce the risk of injury, read the instruction manual.**
- **This tool will provide dependable service if operated in accordance with the instructions given in this manual. Read and understand this manual and any stickers and tags attached to the tool and hoses before operation. Failure to do so could result in personal injury or equipment damage.**

REQUIREMENTS FOR OPERATORS

- **Establish a training program for all operators to ensure safe operation. Do not operate the tool unless thoroughly trained or under the supervision of an instructor. Keep out of the reach of children.**
- **Operators and maintenance personnel shall be able to physically handle the bulk, weight and power of the tool.**
- **Avoid unsuitable postures as these positions do not allow for counteracting of normal or unexpected movement of the tool. Change postures during extended tasks to help avoid discomfort or fatigue.**
- **Supervising personnel should develop additional precautions relating to the specific work area and local safety regulations.**
- **Operators must be familiar with all prohibited work areas such as excessive slopes and dangerous terrain conditions.**

OPERATION

- **Do not operate the tool in explosive atmospheres, such as in the presence of flammable liquids, gases or dust. Power tools create sparks which may ignite the dust or fumes.**
- **Do not inspect, carry, clean, change accessories or perform maintenance on the tool while the power source is connected. Accidental engagement of the tool can cause serious injury.**
- **Ensure work piece is securely fixed. Be aware that failure of the work piece or accessories may generate high velocity projectiles.**
- **During operation, do not contact mechanisms, accessories or hardware as they can become very hot; use your Personal Protection Equipment (PPE).**
- **Do not overreach. Maintain proper footing and balance at all times when using the tool. Do not start grinding until the work area is clear and you have secure footing.**
- **Slips, trips and falls are major causes of workplace injury. Be observant of hoses and other objects or oily surfaces lying about the work area, as they can be a tripping hazard.**
- **Only use clean fluids and lubricants that have been recommended by STANLEY.**

- **Do not force the tool to do the work of a larger tool. Use the correct tool for your application.**
- **Keep hands away from rotating parts. Rotating parts can easily entangle rubber-coated gloves or metal reinforced gloves.**
- **Do not use in confined spaces. Beware of crushing hazards between the tool and the workpiece.**
- **Prevent unintentional starting. Ensure the trigger is in the off position before connecting to power source, picking up or carrying the tool. Carrying power tools with your finger on the trigger or energizing power tools that have the trigger on invites accidents.**
- **In spite of the application of relevant safety regulations and the implementation of safety devices, certain residual risks cannot be avoided. These risks are: repetitive strain injury due to incorrect posture and risk of pinching fingers when pulling the tool trigger.**
- **Select and replace grinding wheel as recommended in order to prevent an unnecessary increase in dust or fumes.**
- **Keep tool handles dry, clean and free from oil and grease. This will enable better control of the tool.**
- **Do not grind on vessels containing combustible substances.**
- **Ensure the grinding wheel is stopped when setting down the tool. Never transport or store the tool with a grinding wheel installed.**
- **Ensure that the abrasive wheel is properly clamped before each use. Follow all instructions.**
- **Keep all body parts away from rotating components of the tool.**
- **Do not start the tool if the grinding wheel is touching a surface.**
- **Provide adequate ventilation in closed areas when operating a gas or diesel hydraulic power source.**
- **Do not reverse tool rotation direction by changing hydraulic fluid flow direction.**
- **Use only hoses and hose couplings that are rated for a minimum working pressure of 2500 PSI (172 BAR).**
- **The tool is not insulated against coming into contact with electric power. Use hose certified as non-conductive.**
- **Repair and service of this tool must only be performed by an authorized and certified dealer.**

PERSONAL PROTECTIVE EQUIPMENT (PPE)

- **Hands may be exposed to hazards, impacts, cuts, abrasions and heat. Wear gloves.**
- **Wear a hardhat if performing overhead work.**
- **Do not wear loose fitting clothing, jewelry or gloves with cut or frayed fingers when operating the tool. Entanglement, choking, scalping and laceration can occur if loose clothing, personal jewelry, neck wear, hair or gloves are not kept away from the rotating tool and it's accessories. Gloves can become entangled with the rotation drive, causing severed or broken fingers.**
- **Grinding sparks can ignite clothing and cause severe burns. Ensure sparks do not land on clothing. Wear fire-retardant clothing and have a bucket of water nearby.**

Equipment Safety Precautions

SOUND

- **Exposure to high noise levels can cause permanent, disabling hearing loss and other problems, such as tinnitus (ringing, buzzing, whistling or humming in the ears). Use hearing protection in accordance with employer's instructions and as required by occupational health and safety regulations. Appropriate controls to reduce the risk can include actions such as damping materials to prevent work pieces from "ringing".**
- **Use and maintain tool as recommended in the manual to prevent an unnecessary increase in noise levels.**

VIBRATION

- **When using a rotary or percussive tool to perform work related activities, the operator can experience discomfort in the hands, arms, shoulders, neck or other parts of the body.**
- **If you experience numbness, tingling, pain or whitening of the skin in your fingers or hands, stop using the tool. Tell your employer and consult a physician.**
- **Wear warm clothing when working in cold conditions and keep your hands warm and dry.**
- **Exposure to vibration can cause disabling damage to the nerves and blood supply of the hands and arms.**
- **Do not allow the abrasive product to chatter on the work piece as this is likely to cause a substantial increase in vibration.**
- **Use and maintain tool as recommended in the manual to prevent an unnecessary increase in vibration.**
- **Check the vibration level after each service. If higher than normal, contact your STANLEY dealer.**

HYDRAULIC

- **Do not exceed the maximum relief valve setting stated on the tool.**
- **Hydraulic circuit control valve must be OFF before coupling or uncoupling tools. Failure to do so may damage the couplers and cause overheating of the hydraulic system.**
- **Do not operate the tool at fluid temperatures above 140°F (60°C). Higher temperatures can cause operator discomfort and damage to the tool.**
- **Do not exceed the rated flow and pressure as stated on the tool. Rapid failure of the internal seals may result.**
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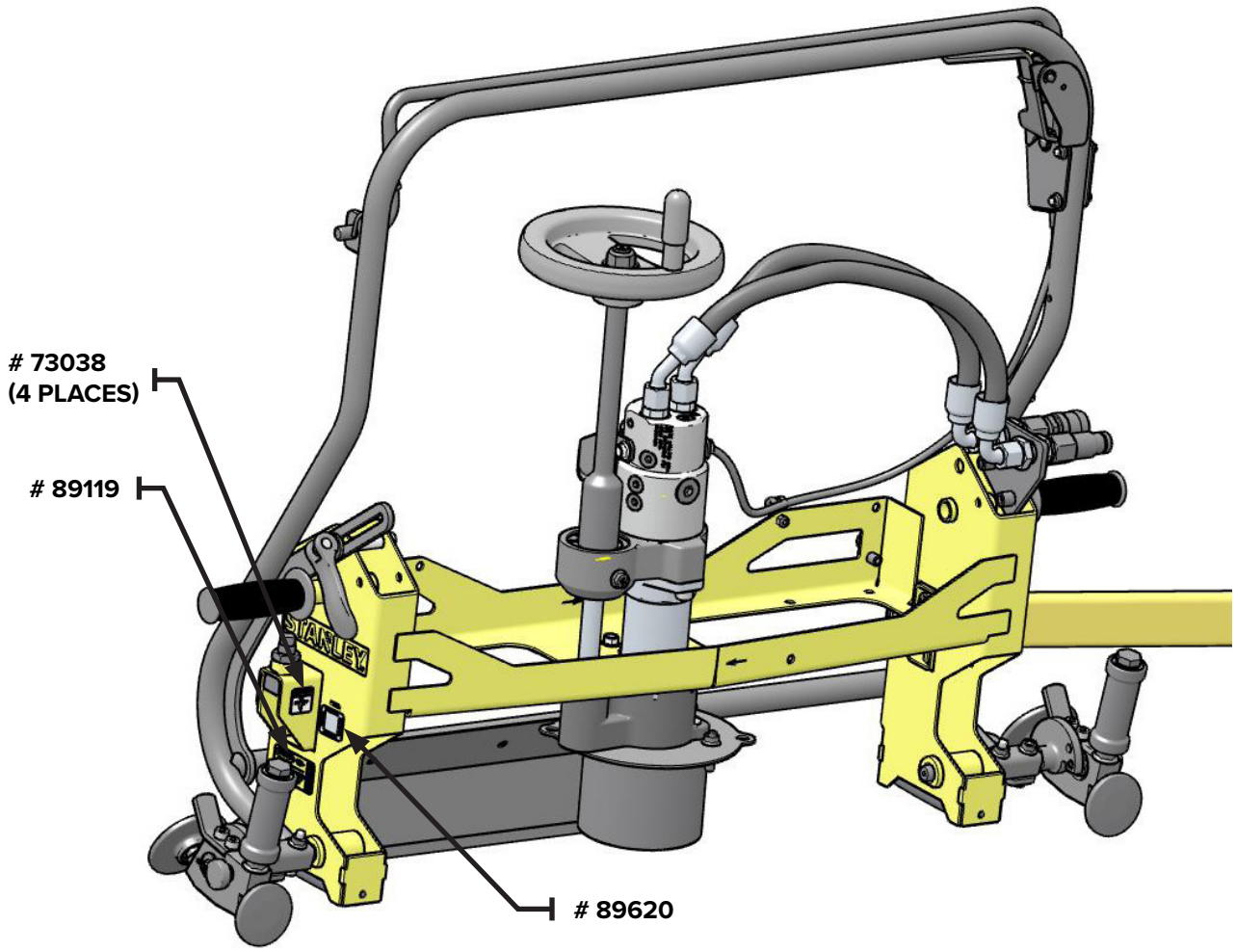
Decals

Decal Placement

GENERAL INFORMATION

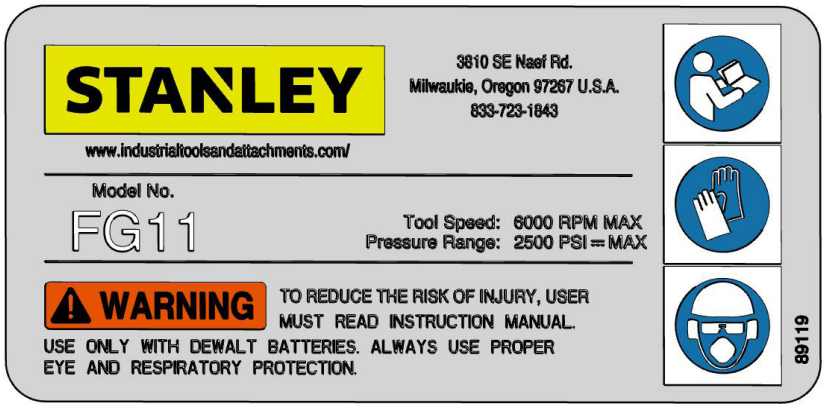
The diagrams on this page show the location of the decals used on your tool. The decals are identified by their part numbers, with reductions of the actual decals located on the following page. Use this information to order replacements for lost or damaged decals. Be sure to read all decals before operating the tool. They contain information you need to know for both safety and product longevity.



IMPORTANT

Keep all safety decals clean and legible. Replace all missing, illegible, or damaged safety decals. When replacing parts with safety decals attached, the safety decals must also be replaced. Safety decals are available from your local dealer or STANLEY.

REPLACING SAFETY DECALS: Clean the area of application with nonflammable solvent, then wash the same area with soap and water. Allow the surface to fully dry. Remove the backing from the safety decal, exposing the adhesive surface. Apply the safety decal to the position shown in the diagram above and smooth out any bubbles.



WARNING!

 # 89119 - READ MANUAL / WEAR PPE

 # 89620 - QR CODE

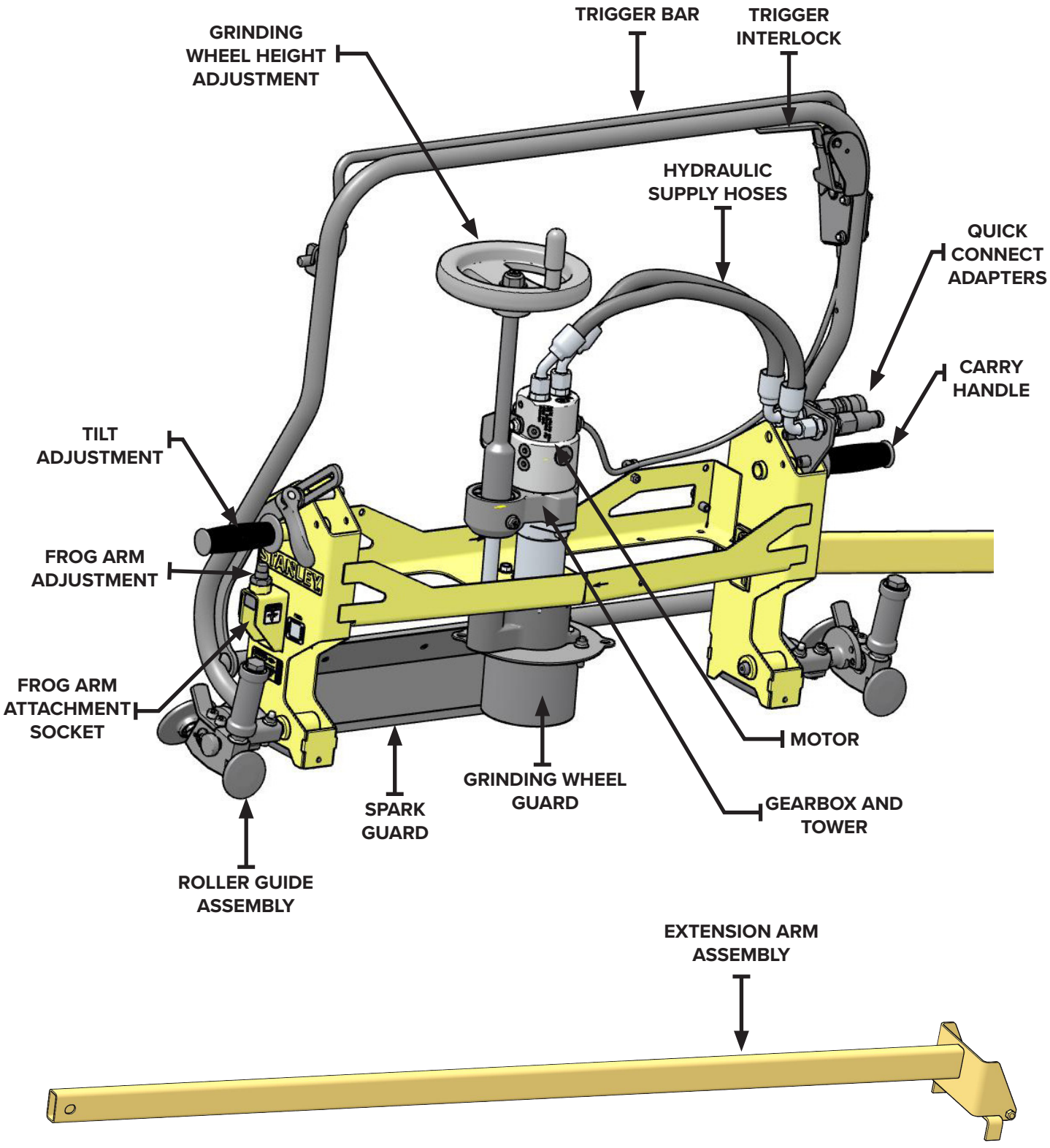
WARNING!

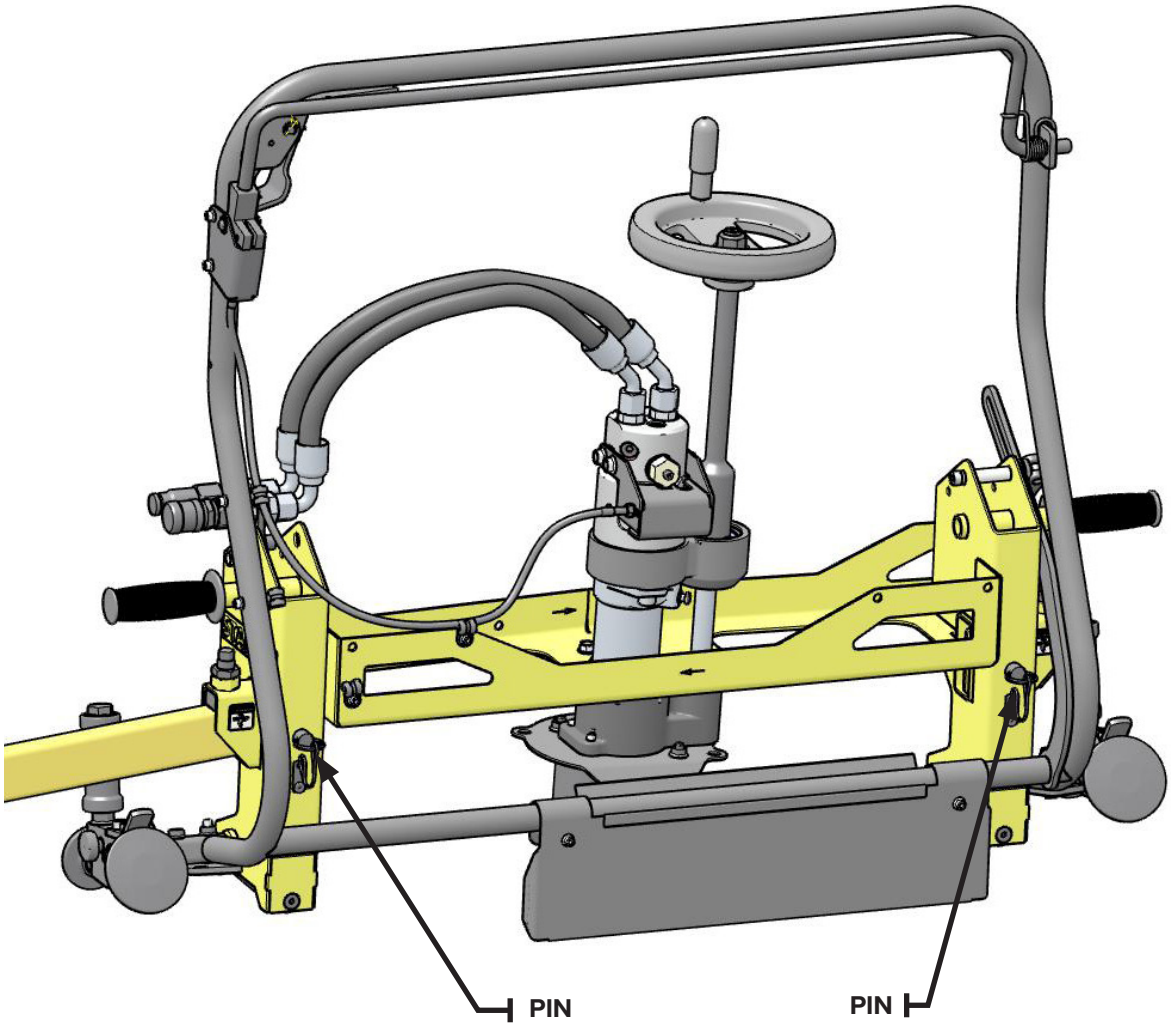
 # 73038 - PINCH POINT STICKER 1.5”

NOTE

Contact your local dealer for logo decals.

Nomenclature

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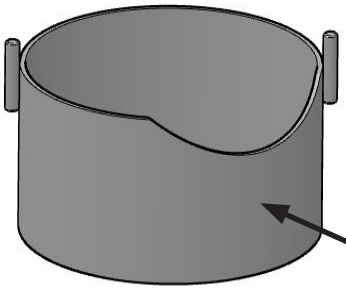

OPTIONAL LARGER 6IN
STONE GUARD

Installation

GENERAL INFORMATION

The grinder is hydraulically powered and will provide safe and dependable service if operated in accordance with the instructions given in this manual.

Read all safety warnings, decals, and operating instructions before operating the tool. If there is any portion of this manual that you do not understand, contact your dealer.

⚠ WARNING!

READ MANUAL PRIOR TO INSTALLATION

Improper installation, operation, or maintenance of this equipment could result in serious injury or death. Operators and maintenance personnel should read this manual, as well as all manuals related to this equipment thoroughly before beginning installation, operation, or maintenance.

FOLLOW ALL SAFETY INSTRUCTIONS IN THIS MANUAL.

HYDRAULIC HOSES

The rated working pressure of the hydraulic hose must be equal to or higher than the relief valve setting on the hydraulic system. There are three types of hydraulic hose that meet this requirement and are authorized for use with STANLEY hydraulic tools. They are:

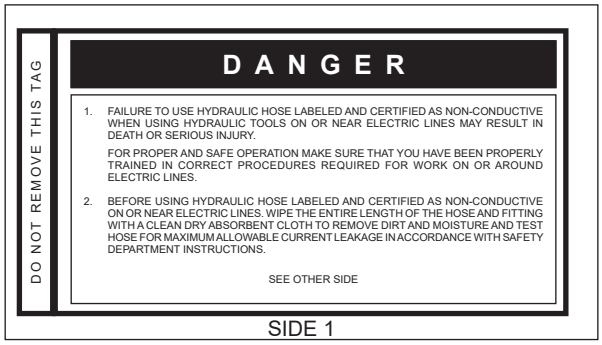
- **Certified non-conductive** — constructed of thermoplastic or synthetic rubber inner tube, synthetic fiber braid reinforcement, and weather resistant thermoplastic or synthetic rubber cover. *Hose labeled **certified non-conductive** is the only hose authorized for use near electrical conductors.*
- **Wire-braided** (conductive) — constructed of synthetic rubber inner tube, single or double wire braid reinforcement, and weather resistant synthetic rubber cover. *This hose is **conductive** and must never be used near electrical conductors.*
- **Fabric-braided** (not certified or labeled non-conductive) — constructed of thermoplastic or synthetic rubber inner tube, synthetic fiber braid reinforcement, and weather resistant thermoplastic or synthetic rubber cover. *This hose is **not certified non-conductive** and must never be used near electrical conductors.*

Hose Safety Tags

To help ensure your safety, the following DANGER tags are attached to all hose purchased from STANLEY. DO NOT REMOVE THESE TAGS.

If the information on a tag is illegible because of wear or damage, replace the tag immediately. A new tag may be obtained from your STANLEY Distributor.

THE TAG SHOWN BELOW IS ATTACHED TO "CERTIFIED NON-CONDUCTIVE" HOSE



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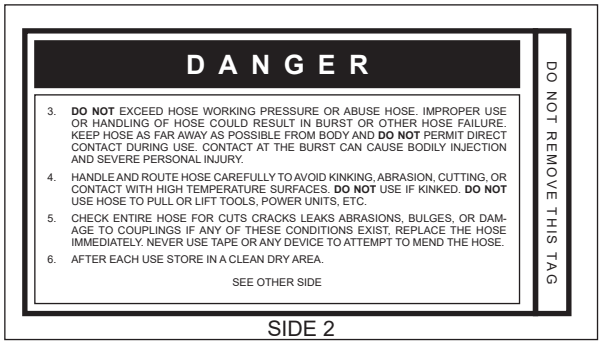

SIDE 2

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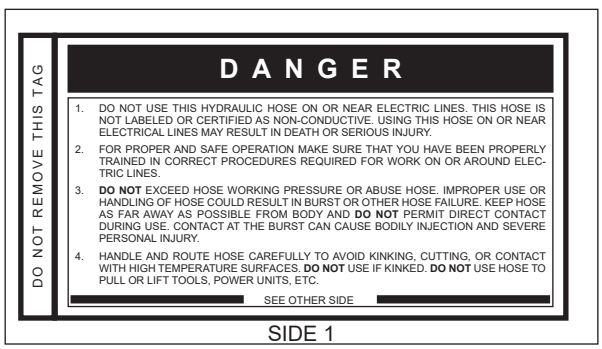
THE TAG SHOWN BELOW IS ATTACHED TO "CONDUCTIVE" HOSE.



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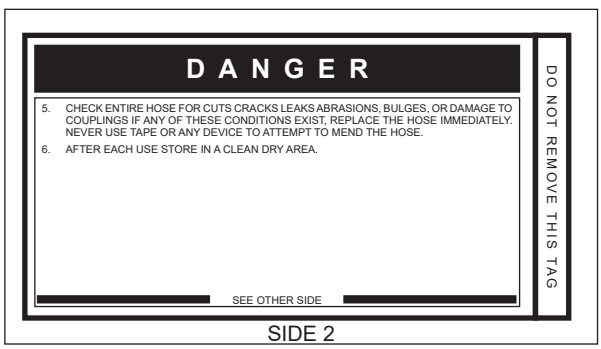


SIDE 2

(Shown smaller than actual size)

Installation

Tool to Hydraulic Circuit Hose Recommendations

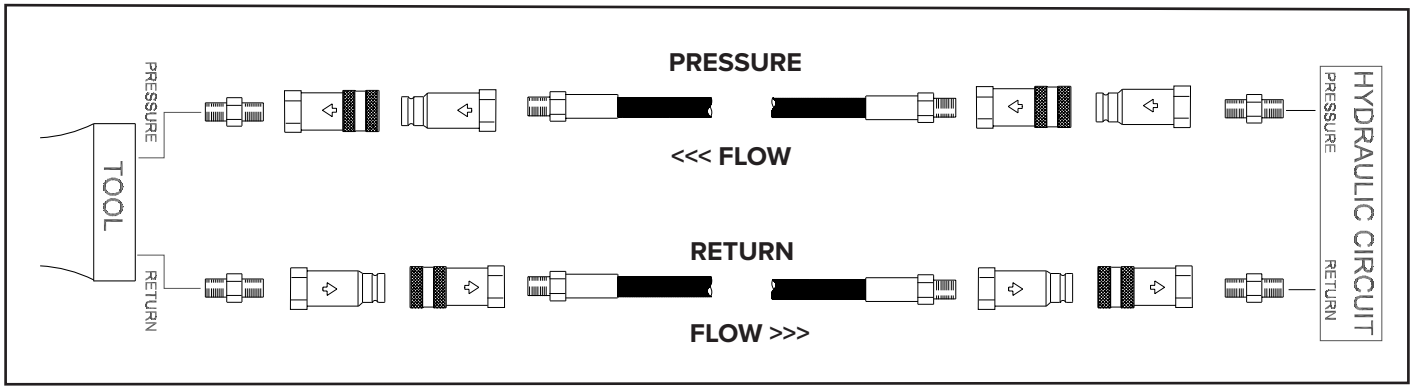
The chart below shows recommended minimum hose diameters for various hose lengths based on gallons per minute (GPM)/liters per minute (LPM). These recommendations are intended to keep return line pressure (back pressure) to a minimum acceptable level to ensure maximum tool performance.

This chart is intended to be used for hydraulic tool applications only based on STANLEY tool operating requirements and should not be used for any other applications.

All hydraulic hose must have at least a rated minimum working pressure equal to the maximum hydraulic system relief valve setting.

All hydraulic hose must meet or exceed specifications as set forth by SAE J517.

Oil Flow		Hose Lengths		Inside Diameter		USE (Press/Return)	Min. Working Pressure	
GPM	LPM	FEET	METERS	INCH	MM		PSI	BAR
Certified Non-Conductive Hose - Fiber Braid - for Utility Bucket Trucks								
4-9	15-34	up to 10	up to 3	3/8	10	Both	2250	155
Conductive Hose - Wire Braid or Fiber Braid -DO NOT USE NEAR ELECTRICAL CONDUCTORS								
4-6	15-23	up to 25	up to 7.5	3/8	10	Both	2500	175
4-6	15-23	26-100	7.5-30	1/2	13	Both	2500	175
5-10.5	19-40	up to 50	up to 15	1/2	13	Both	2500	175
5-10.5	19-40	51-100	15-30	5/8	16	Both	2500	175
5-10.5	19-40	100-300	30-90	5/8	16	Pressure	2500	175
				3/4	19	Return	2500	175
10-13	38-49	up to 50	up to 15	5/8	16	Both	2500	175
10-13	38-49	51-100	15-30	5/8	16	Pressure	2500	175
				3/4	19	Return	2500	175
10-13	38-49	100-200	30-60	3/4	19	Pressure	2500	175
				1	25.4	Return	2500	175
13-16	49-60	up to 25	up to 8	5/8	16	Pressure	2500	175
				3/4	19	Return	2500	175
13-16	49-60	26-100	8-30	3/4	19	Pressure	2500	175
				1	25.4	Return	2500	175

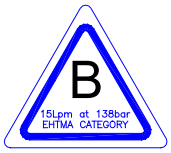


TYPICAL HOSE CONNECTION

HTMA REQUIREMENTS

	TOOL TYPE			
HTMA HYDRAULIC SYSTEM REQUIREMENTS	**TYPE I**	**TYPE II**	**TYPE RR**	**TYPE III**
Flow range	4-6 GPM (15-23 LPM)	7-9 GPM (26-34 LPM)	9-10.5 GPM (34-40 LPM)	11-13 GPM (42-49 LPM)
Nominal operating pressure (At the power supply outlet)	1500 psi (103 bar)	1500 psi (103 bar)	1500 psi (103 bar)	1500 psi (103 bar)
System relief valve setting (At the power supply outlet)	2100-2250 psi (145-155 bar)	2100-2250 psi (145-155 bar)	2200-2300 psi (152-159 bar)	2100-2250 psi (145-155 bar)
Maximum back pressure (At tool end of the return hose)	250 psi (17 bar)	250 psi (17 bar)	250 psi (17 bar)	250 psi (17 bar)
Measured at a max fluid viscosity of: (At minimum operating temperature)	400 ssu* (82 centistokes)	400 ssu* (82 centistokes)	400 ssu* (82 centistokes)	400 ssu* (82 centistokes)
Temperature: Sufficient heat rejection capacity to limit maximum fluid temperature to: (At maximum expected ambient temperature)	140° F (60° C)	140° F (60° C)	140° F (60° C)	140° F (60° C)
Minimum cooling capacity at a temperature difference of between ambient and fluid temps	3 hp (2.24 kW) 40° F (22° C)	5 hp (3.73 kW) 40° F (22° C)	6 hp (5.22 kW) 40° F (22° C)	7 hp (4.47 kW) 40° F (22° C)
Note: Do not operate the tool at oil temperatures above 140° F (60° C). Operation at higher temperatures can cause operator discomfort at the tool.				
Filter minimum full-flow filtration	25 microns	25 microns	25 microns	25 microns
Sized for flow of at least: (For cold temp startup and maximum dirt-holding capacity)	30 GPM (114 LPM)	30 GPM (114 LPM)	30 GPM (114 LPM)	30 GPM (114 LPM)
Hydraulic fluid, petroleum based (premium grade, anti-wear, non-conductive) Viscosity (at minimum and maximum operating temps)	100-400 ssu (20-82 centistokes)	100-400 ssu (20-82 centistokes)	100-400 ssu (20-82 centistokes)	100-400 ssu (20-82 centistokes)
Note: When choosing hydraulic fluid, the expected oil temperature extremes that will be experienced in service determine the most suitable temperature viscosity characteristics. Hydraulic fluids with a viscosity index over 140 will meet the requirements over a wide range of operating temperatures. *SSU = Saybolt Seconds Universal				

EHTMA REQUIREMENTS

	CLASSIFICATION				
EHTMA HYDRAULIC SYSTEM REQUIREMENTS					
Flow range	3.5-4.3 GPM (13.5-16.5 LPM)	4.7-5.8 GPM (18-22 LPM)	7.1-8.7 GPM (27-33 LPM)	9.5-11.6 GPM (36-44 LPM)	11.8-14.5 GPM (45-55 LPM)
Nominal operating pressure (At the power supply outlet)	1870 psi (129 bar)	1500 psi (103 bar)	1500 psi (103 bar)	1500 psi (103 bar)	1500 psi (103 bar)
System relief valve setting (At the power supply outlet)	2495 psi (172 bar)	2000 psi (138 bar)	2000 psi (138 bar)	2000 psi (138 bar)	2000 psi (138 bar)

Note: These are general hydraulic system requirements. See tool specification page for tool specific requirements.

Operation

INTENDED USE

This tool has been designed and built to grind railroad rail. Use in any other way is considered contrary to the intended use. Compliance with and strict adherence to operation, service, and repair conditions as specified by the manufacturer, are also essential elements of the intended use.

⚠ WARNING!

DISCONNECT TOOL

Do not install, change tool accessories, clean, or perform maintenance on the tool while it is connected to the hydraulic power source. Disconnect the hydraulic hoses before performing maintenance.

ACCIDENTAL ENGAGEMENT OF THE TOOL CAN CAUSE SERIOUS INJURY.

⚠ CAUTION!

HEAVY OBJECT HAZARD

Always use two people to lift and carry the tool. Failure to comply could result in minor or moderate injury.

1. Grab the carrying handles.
2. Lift the tool and move it to the jobsite.

PREPARATION PROCEDURES

Check Hydraulic Power Source

1. Using a calibrated flow meter and pressure gauge, check that the hydraulic power source develops a flow of 7-10 gpm/26-38 lpm at 1500-2000 psi/105-140 bar.
2. Make certain the hydraulic power source is equipped with a relief valve set to open at 2100-2250 psi/145-155 bar minimum.
3. Check that the hydraulic circuit matches the tool for open-center (OC) or closed-center (CC) operation.

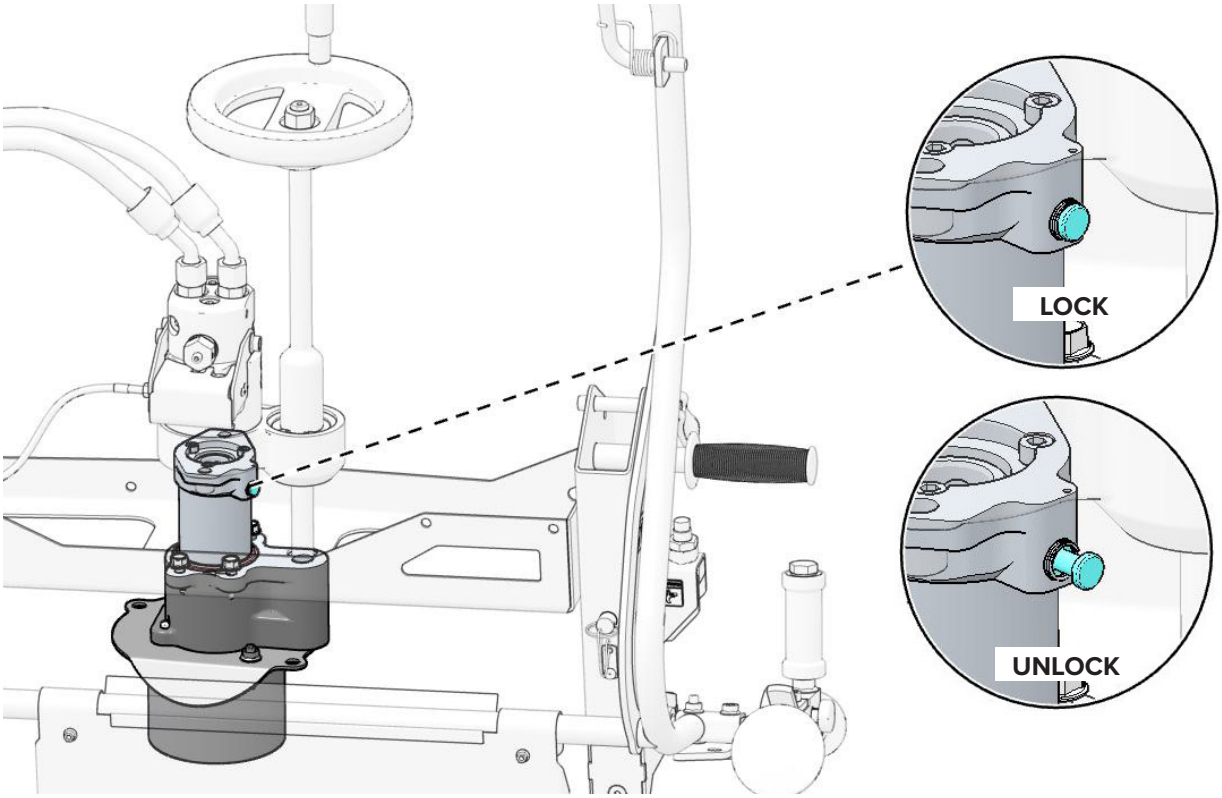
Check The Tool

1. Make sure all tool accessories are correctly installed. Failure to install tool accessories properly can result in damage to the tool or personal injury.
2. There should be no signs of leaks.
3. The tool should be clean, with all fittings and fasteners tight.

4. Check that the trigger interlock and trigger bar both operate smoothly and are free to travel between the “ON” and “OFF” positions.
5. Inspect the wheel guard weldment for cracks and other structural damage.

SHAFT LOCK OPERATION

When installing or removing the grinding wheel, it will be necessary to lock the shaft from turning. Lock the shaft with the shaft lock button as shown below. It may be necessary to rotate the shaft until the shaft lock is able to engage.



INSTALLING THE GRINDING WHEEL

NOTE

Use 4 inch diameter grinding wheel, up to 3 inch thick (Type 6 for USA) with a 5/8-11 threaded arbor hole. Only use grinding wheels which comply with ANSI B7.1, B7.5/ISO 525, 603. A 6 inch diameter grinding wheel with the same specifications can also be used if the default 4” wheel guard is replaced with th 6” wheel guard.

1. Make sure the tool is disconnected from hydraulic power source.
2. Push in the shaft lock button to keep shaft from turning.
3. Screw the grinding wheel onto the shaft until it comes in contact with the drive flange.

4. Tighten by gripping and turning the wrench. Sufficient torque is attained by hand-tightening the wheel.
5. Press the shaft lock button again to unlock the shaft for operation.

REMOVING THE GRINDING WHEEL

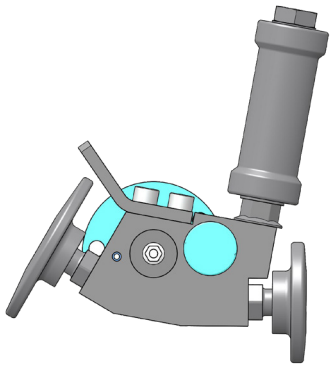
1. Disconnect the tool from the hydraulic power source.
2. Push in the shaft lock button to keep shaft from turning.
3. Remove the grinding wheel.

IMPORTANT

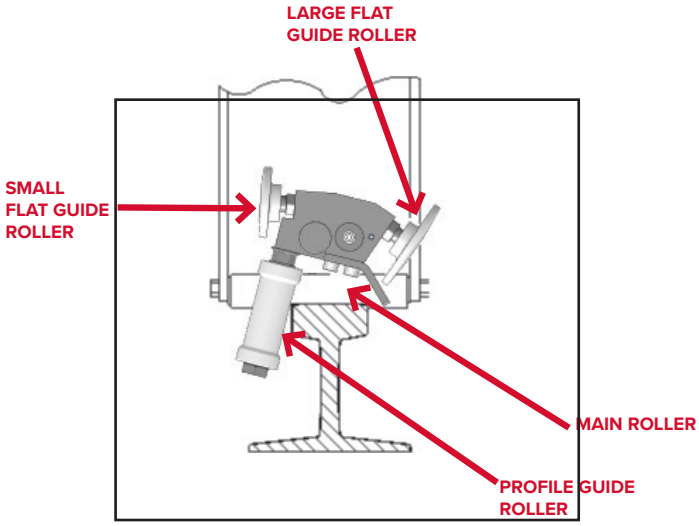
Never loosen the grinding wheel by impacting the wrench or the stone with a mallet or hammer.

ROLLER GUIDE ADJUSTMENTS FOR GRINDING OPERATIONS

The roller guides can be rotated into grinding or storage positions as needed. First pull out the adjustment lock knob and then rotate the rollers into the desired position. Reset the adjustment lock to secure into place. Note there are three possible locations to secure the rollers depending on use case. The sections below outline the various positions for the rollers depending on use.



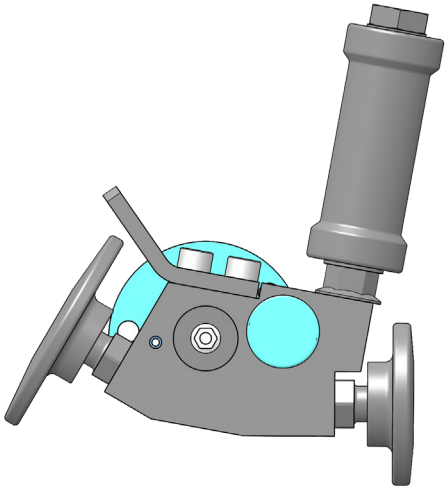
TRANSPORTATION POSITION

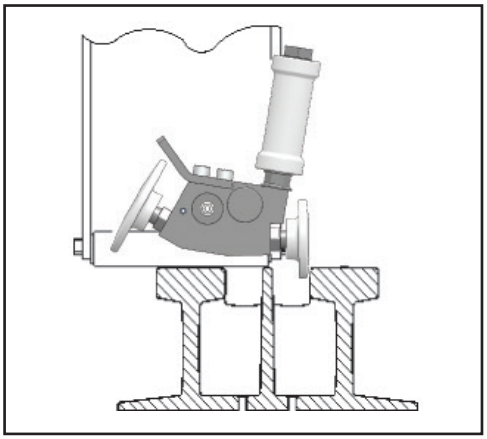


TYPICAL RAIL

Grinding The Point

For grinding the point of a frog, place the grinder on top of the point with the rollers resting on the top of the point. Adjust each roller guide to the position shown below. Grinding is accomplished by moving the grinder back and forth in line with the rail. It may be necessary to rotate the entire grinder 180 degrees and place it on the other side of the point in order to completely grind the width of the point. The extension assembly is normally used during point grinding operations.

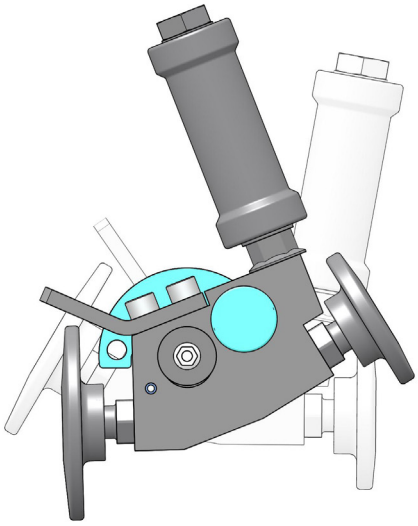


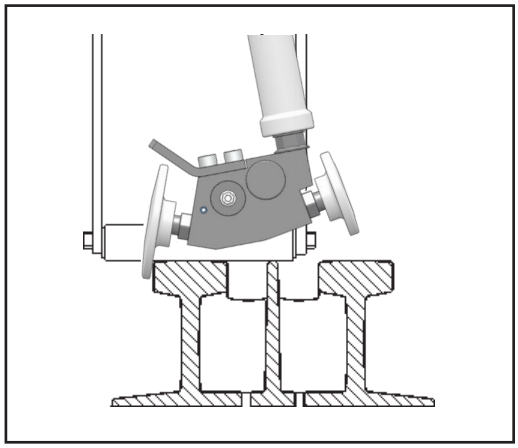


TYPICAL FROG AT 1/2” POINT

Grinding Wings

For grinding a wing of the frog, place the grinder on top of the wing with the rollers resting on top of the wing to be ground. Adjust each roller guide to the position shown below. Grinding is accomplished by moving the grinder back and forth in line with the rail. When finished with one wing, rotate the entire grinder 180 degrees and place it on the other wing.



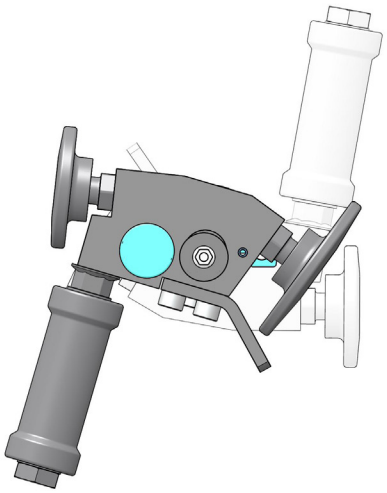


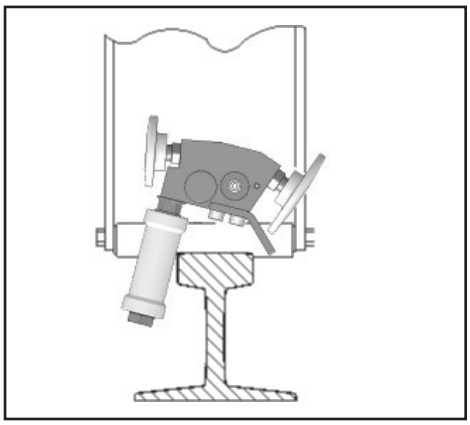
TYPICAL FROG AT 1/2” POINT

Operation

Profile Grinding

For profile grinding of rail, place the grinder on top of the rail with the rollers resting on top of the rail to be ground. Adjust each roller guide to the position shown below. Grinding is accomplished by moving the grinder back and forth in line with the rail. Keep the guide roller engaged with the rail profile at all times when grinding.

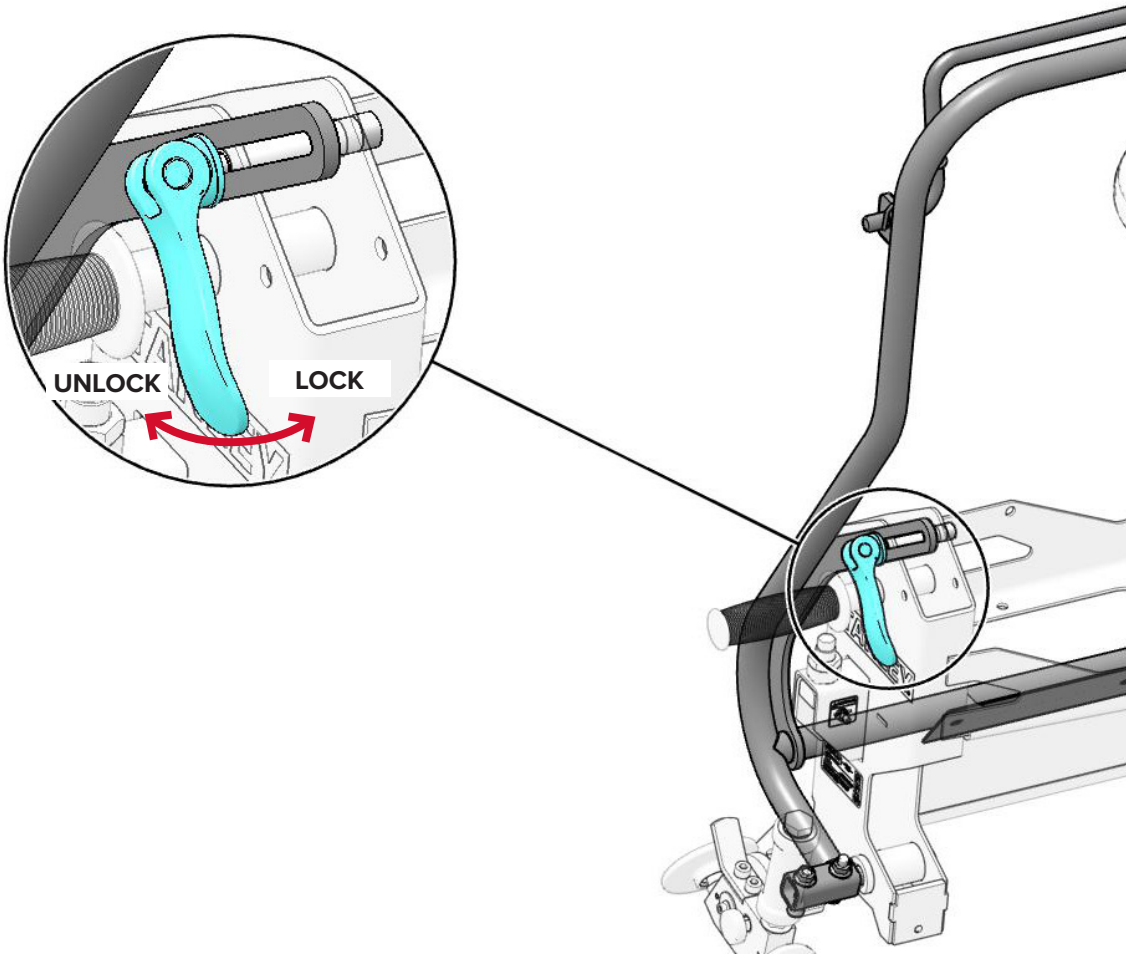




TYPICAL RAIL

TILT FEATURE

The grinder can be tilted for grinding more vertical surfaces. Unlock by pulling the over center lever out. Rotate grinder to desired position. Lock into place by pushing over center lever in. Rotating the lever will not change the clamping force.

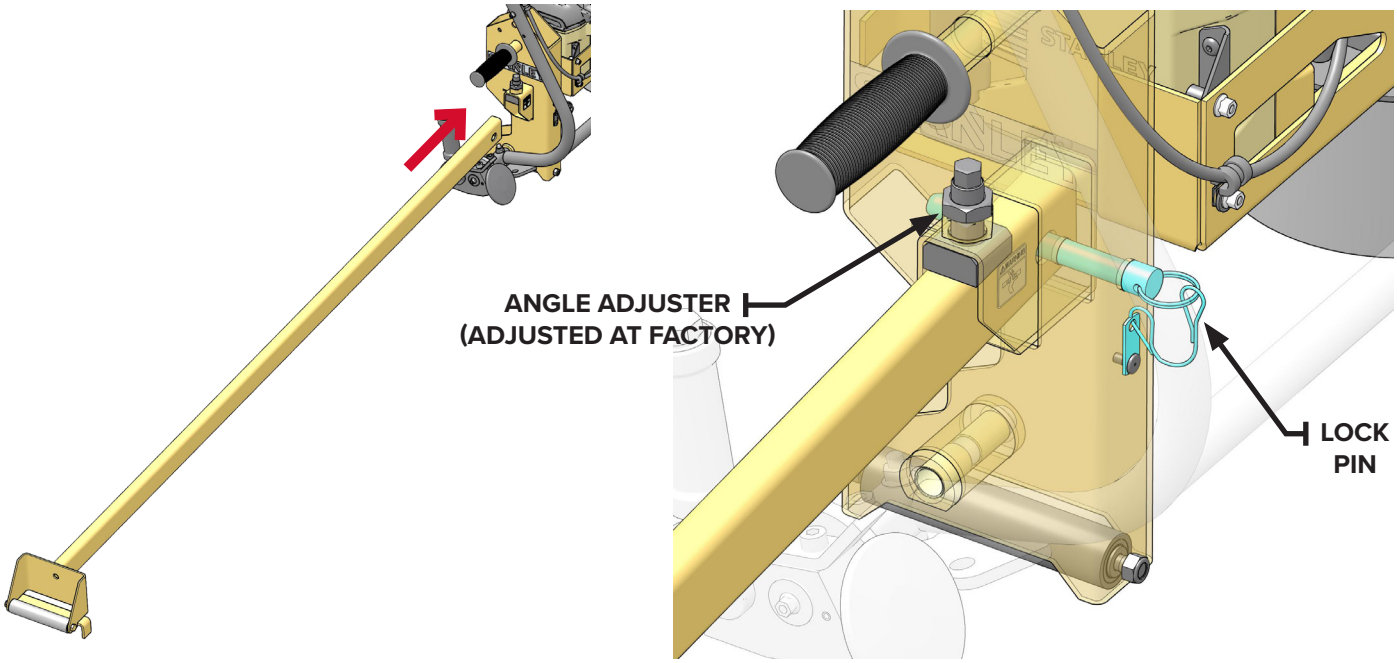


Operation

EXTENSION ASSEMBLY

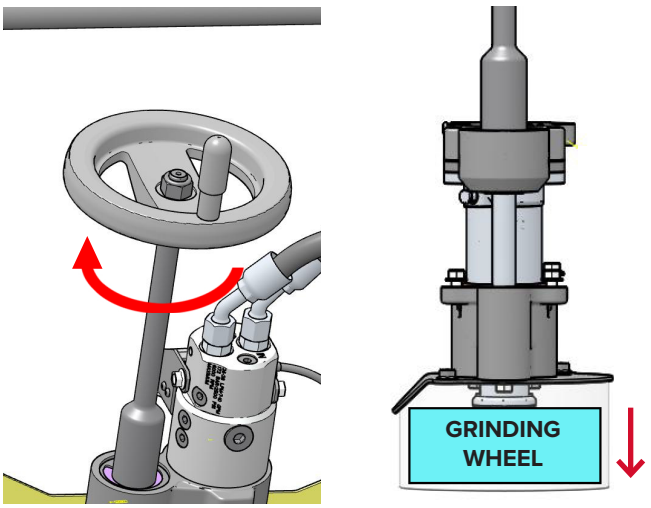
The extension assembly can be used at anytime by simply connecting it to one end of the grinder and inserting the lock pin. The angle adjustment for the extension arm should be done at the factory, but if it needs to be adjusted later it can be. To adjust:

1. Insert the arm and place on a section of rail.
2. Loosen the jam nut
3. Rotate the stud clockwise to increase the angle (raise the center roller) or counterclockwise to decrease the angle (lower the center roller).
4. Keep the stud from rotating and re-tighten the jam nut to secure in place.

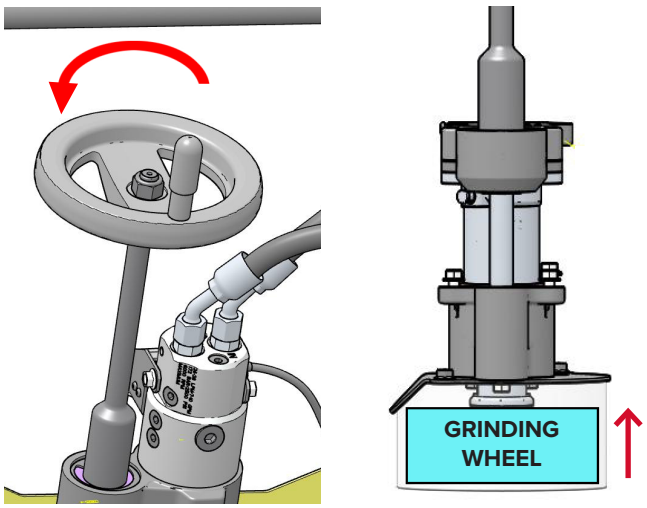


GRINDING WHEEL HEIGHT ADJUSTMENT

Adjust the height of the grinding wheel by turning the hand wheel on the grinder. While standing in the proper operating position, either turn the hand wheel clockwise to lower the grinding wheel or counter-clockwise to raise the grinding wheel.



CLOCKWISE
(LOWER GRINDING WHEEL)

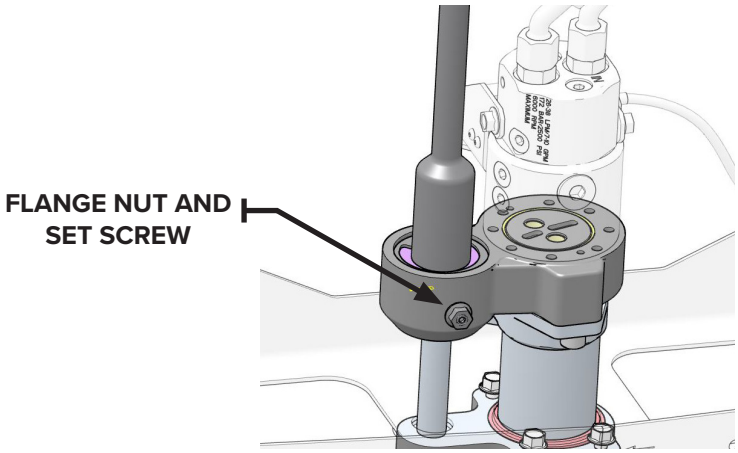


COUNTER-CLOCKWISE
(RAISE GRINDING WHEEL)

HAND WHEEL TENSION ADJUSTMENT

The rotational tension on the hand wheel can be adjusted to stop the hand wheel from rotating during operation. To adjust the tension:

1. Locate the flange nut and set screw at base of hand wheel.
2. Loosen the flange nut (rotate counter-clockwise).
3. Rotate the set screw clockwise with a hex key until the desired tension is achieved.
4. Keep the set screw from turning with hex key and tighten the flange nut (rotate clockwise).



Operation

CONNECTING HYDRAULICS

IMPORTANT

Always use hoses, couplings and other parts recommended by STANLEY. Supply hoses must have a minimum working pressure rating of 2500 psi/172 bar.

NOTICE

The hydraulic circuit control valve must be in the "OFF" position when coupling or uncoupling hydraulic tools. Failure to do so may result in damage to the quick couplers and cause overheating of the hydraulic system.

1. Wipe all hose couplers with a clean lint-free cloth before making connections.
2. Connect the hoses from the hydraulic power source to the hose couplers on the grinder. Connect the return hose first and disconnect it last to minimize trapped pressure within the grinder motor.

NOTICE

Make sure the circuit PRESSURE hose (with male quick disconnect) is connected to the "IN" port. The circuit RETURN hose (with female quick disconnect) is connected to the opposite port. Do not reverse circuit flow. This can cause damage to internal seals.

3. Observe flow indicators stamped on hose couplers to be sure that oil will flow in the proper direction. The female coupler is the inlet coupler.
4. Ensure the recommended relief valves are installed in the pressure side of the system.

NOTE

The pressure increase in uncoupled hoses left in the sun may result in making them difficult to connect. When possible, connect the free ends of operating hoses together.

OPERATING PROCEDURES

⚠ WARNING!

ENTANGLEMENT HAZARD

Keep all body parts, hair, and loose clothing away from rotating drives. Entanglement, choking, scalping and laceration can occur if loose clothing, personal jewelry, neck wear, hair, or gloves are not kept away from the rotating tool and it's accessories.

KEEP AWAY FROM ROTATING DRIVES

1. Observe all safety precautions.
2. Always start the grinder with the grinding wheel away from the work surface by turning the handwheel counter clockwise to raise the grinding wheel.

3. Move the hydraulic circuit control valve to the “ON” position.
4. Squeeze the trigger interlock to unlock the trigger bar.
5. Squeeze the trigger bar momentarily. If the grinder does not operate, the hoses might be reversed. Verify correct connection of the hoses before continuing.
6. Start the grinder and move the grinding wheel to the work surface by turning the handwheel clockwise.
7. Grind a small amount of material at a time adjusting the grinding wheel as necessary by turning the handwheel.

NOTE

If the grinder is not loaded against a work surface when the trigger is released, the wheel will take 5-10 seconds to come to a complete stop. Avoid unintentional contact of the grinding wheel during the coast down period.

COLD WEATHER OPERATION

If the grinder is to be used during cold weather, preheat the hydraulic fluid at low engine speed. When using the normally recommended fluids, fluid temperature should be at or above 50° F/10° C (400 ssu/82 centistokes) before use. Damage to the hydraulic system or grinder can result from use with fluid that is to viscous or too thick.

OPERATING TIPS

- If the grinder fails to grind material, carefully check the condition of the grinding wheel and make sure that it has not been damaged.
- Check the condition of the grinding wheel often and change it when necessary. If the grinding wheel is near the end of its life, it will take longer to grind down material. You may also notice a change in the sound when grinding. This is an indication that the grinding wheel may be at the end of its life.
- Do not exceed the rated flow. Rapid failure of the internal seals may result. See “SPECIFICATIONS” for correct flow rate.

Operation

STORAGE

⚠ WARNING!

DISCONNECT TOOL
Do not store or transport the tool while it is connected to the hydraulic power source. Disconnect hydraulic hoses from the tool.

ACCIDENTAL ENGAGEMENT OF THE TOOL CAN CAUSE SERIOUS INJURY.

- Clean the outside surfaces of the tool with a damp cloth. Remove all metal dust and debris.
- Store the tool in a clean and dry space, safe from damage or pilferage.
- Store the tool vertically.

REMOVAL FROM STORAGE

- Inspect the tool for damage. If damage is found, have the tool repaired by an authorized STANLEY service center before use.
- Inspect all the tool safety labels. Replace if they are damaged or not legible. Contact your STANLEY dealer for replacements.

TRANSPORTING

⚠ WARNING!

DISCONNECT TOOL
Do not store or transport the tool while it is connected to the hydraulic power source. Disconnect hydraulic hoses from the tool.

ACCIDENTAL ENGAGEMENT OF THE TOOL CAN CAUSE SERIOUS INJURY.

- Follow all local government regulations that may apply along with recommended tie down points and any equipment safety precautions at the front of this manual when transporting your tool.
- Ensure the tool is disconnected from hydraulic power source before transport.
- Always use the carrying handles when moving the tool.
- Lift only as high as necessary to load. NEVER lift or transport over people.

Maintenance

GENERAL INFORMATION

Regular maintenance is the key to long equipment life and safe operation. Maintenance requirements have been reduced to an absolute minimum. However it is very important that these maintenance functions be performed as described below.

⚠ WARNING!

DISCONNECT TOOL

Do not install, change tool accessories, clean, or perform maintenance on the tool while it is connected to the hydraulic power source. Disconnect the hydraulic hoses before performing maintenance.

ACCIDENTAL ENGAGEMENT OF THE TOOL CAN CAUSE SERIOUS INJURY.

Procedure	Every 8 Hours (Daily)
Inspect the tool for damage. If damage is found, have the tool repaired by an authorized STANLEY service center before use. Do not operate a damaged, improperly adjusted, modified, or incompletely assembled tool.	✔
Inspect all the tool safety labels. Replace if they are damaged or not legible. Contact your STANLEY dealer for replacements.	✔
Inspect the spindle and drive flange for signs of wear or damage. Run-out should not exceed .004 in./.1 mm TIR on threads or .002 in./.05 mm TIR on arbor diameters and faces.	✔
Procedure	**Every 40 Hours (Weekly)**
Check hoses and fittings for any evidence of leakage, cover wear, cracking or cuts. If any of these defects are found, discontinue use of the tool immediately and have the defects repaired or replaced by a trained technician. Always replace hoses, couplings and other parts with replacement parts recommended by STANLEY. Supply hoses must have a minimum working pressure rating of 2500 psi/172 bar.	✔
Procedure	**Every 500 Hours (6 Months)**
Grease threads.	✔
Procedure	**Every 1 Year**
Have the tool serviced by an authorized STANLEY service center.	✔

Troubleshooting

Problem	Possible Cause	Possible Solution
GRINDER DOES NOT RUN.	Hydraulic power source not functioning.	Check power source for proper flow and pressure (7-10 gpm/ 26-38 lpm @ 1500-2000 psi/ 105-140 bar.
	Couplers or hoses blocked.	Locate and remove restriction.
	Hydraulic motor failure.	Inspect and repair.
	Hydraulic lines not connected.	Connect lines.
GRINDER OPERATES TOO SLOW.	Hydraulic motor speed to slow.	Check power unit for proper flow (7-10 gpm/26-38 lpm)
	High back-pressure.	Check hydraulic system for excessive back-pressure (over 250 psi/17 bar).
	Couplers or hoses blocked.	Locate and remove restriction.
	Oil too hot (above 140°F/60°C) or too cold (below 60°F/16°C).	Check hydraulic power source for proper oil temperature. Bypass cooler to warm oil or provide cooler to maintain proper temperature.
	Relief valve set too low.	Adjust relief valve to 2100-2250 psi/145-155 bar.
	Hydraulic motor worn.	Inspect, repair or replace.
	Flow control malfunctioning.	Have flow control serviced at an authorized STANLEY service center.
GRINDER OPERATES TOO FAST.	Flow control malfunctioning.	Have flow control serviced at an authorized STANLEY service center.

Hydraulic Oil

Hydraulic oil can contaminate the air, ground and water if not properly recycled. Recycle hydraulic oil in accordance with all State, Federal and local laws, at your local oil recycling facility.

Hydraulic Hoses

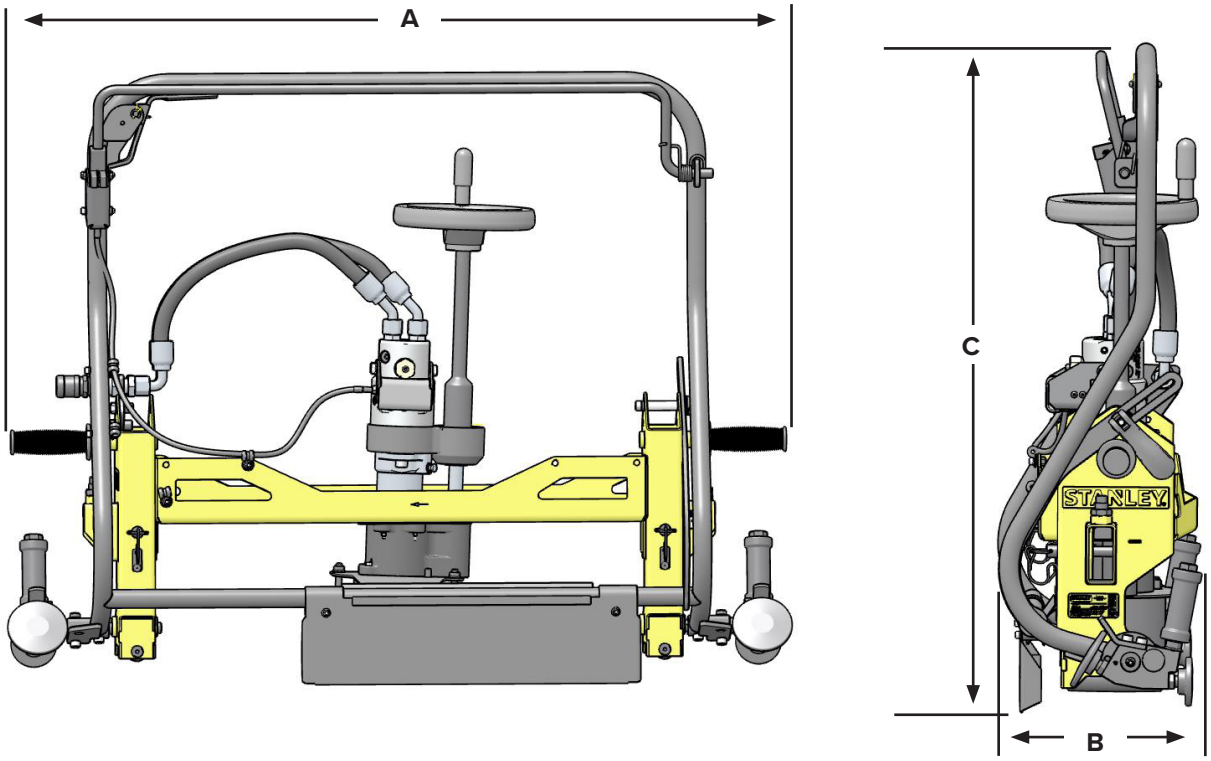
Hang hydraulic hoses to drain. Collect the oil for recycling. Contact your local municipal recycling authorities for an approved hydraulic hose recycling site.

Tool Disposal

Tool Body

Disassemble the tool and dispose of all non-metal parts. Recycle the metal components. Contact your local municipal recycling authorities for recycling instructions.

Specifications



FG11 Hydraulic Grinder	
Description	**Value**
A. Overall Length (without Extension Arm)	44 inches (111.76 cm)
B. Overall Width	10.5 inches (26.7 cm)
C. Overall Height	32.5 inches (82.5 cm)
Weight (without Extension Arm)	100 lb (45 kg)
Wheel Capacity	4 in. dia. x 3 in. thk x 5/8-11 threaded arbor (Type 6) U.S.A.
Maximum Pressure	2500 psi/172 bar
Maximum Back Pressure	250 psi/17 bar
Flow Range	HTMA Type RR, 7-10 gpm/26-38 lpm
Porting	-8 SAE O-ring
Couplers	HTMA/EHTMA Flush Face Type Male & Female
Connect Size and Type	-8 Male SAE O-ring
Hose Whips	No
Maximum Fluid Temperature	140° F/60° C
RPM	6000
Extension Arm Length	68 inches (173 cm)
Extension Arm Weight	15 lb (7 kg)

Accessories

OTHER ACCESSORIES

Part Number	Description
88617	4 x 3 x 5/8-11 Thread Cup Stone
88833	Stone Wrench for 6” Grinding Stone
28597	6 x 3 x 5/8-11 Thread Cup Stone

Warranty

In order to provide you with the most UP-TO-DATE Warranty information, STANLEY Warranty information can be found at https://industrialtoolsandattachments.com/company/warranty.

Sales, Service, & Support Resources

For service, support resources, or to contact a sales representative please visit https://industrialtoolsandattachments.com/handheld-tools-sales-and-support.

STANLEY

INDUSTRIAL TOOLS & ATTACHMENTS

PALADIN STANLEY LABOUNTY PENGO

Milwaukie, OR 97267 USA