

OPERATOR'S MANUAL



# **POWER SHOVEL**

for Compact Tool Carriers

SERIAL NUMBER: \_\_\_\_\_

MODEL NUMBER: \_\_\_\_\_

Manual Number: OM948 Part Number: 76848

Date: April 2024

Rev. 1

# **Table of Contents**

SAFETY STATEMENTS	6
GENERAL SAFETY PRECAUTIONS	6
EQUIPMENT SAFETY PRECAUTIONS	10
DECALS	13
INSTALLATION	14
General Information	
Installation	
Detaching	14
OPERATION	15
Intended Use	
Operation	
Storage	15
Removal From Storage	15
Lift Points	16
Tie Down Points	16
Transporting	17
MAINTENANCE	18
TOOL DISPOSAL	19
SPECIFICATIONS	20
BOLT TORQUE SPECIFICATIONS	21
PARTS	22
WARRANTY	22

# THIS PAGE IS INTENTIONALLY BLANK



### **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 attachment is mounted.

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



#### **WARNING!**

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

Always choose hard, level ground to park the vehicle on and set the brake so the unit cannot roll.

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 attachment 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.

#### NOTE

A list of all Paladin Patents can be found at http://www.paladinattachments.com/patents.asp.

# **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.



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



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



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

M004 Wear Eye Protection

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.

#### **PROTECT AGAINST FLYING DEBRIS**

▶ Always wear proper safety glasses, goggles, or a face shield when driving pins in or out, or when any operation causes dust, flying debris, or any other hazardous material.

#### **SAFELY OPERATE EQUIPMENT**

- Establish a training program for all operators to ensure safe operation.
- ▶ Do not operate the tool or attachment 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 risks to yourself and others around you before operating the tool. Start in a work area without bystanders and assess the risks to bystanders including, but not limited to, the risk of serious injury or death caused by the tool or accessories dropped from an elevated height.
- ▶ Do not operate the equipment from anywhere other than the correct operator's position.

# General Safety Precautions

- ▶ 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 the State of California to cause cancer, birth defects or other reproductive harm. Some examples of these chemicals are:
  - Lead from lead-based paints
  - Crystalline silica from 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

- ► 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 attachment 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, check for correct functioning of the attachment. If not functioning properly, shut down the machine, 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
- ▶ 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**

#### **OPERATING THE ATTACHMENT**

- ▶ Operate only from the operator's station.
- ▶ Do not operate without good visibility or light.
- ▶ Do not obstruct your vision when traveling or working. Carry the attachment low for maximum stability and visibility.
- ▶ Never use your attachment as a work platform or personnel carrier.
- ▶ Do not overload machine capacity. Do not exceed the lifting capacity of your prime mover.
- ▶ Never lift, move, or swing a loaded attachment over anyone.
- ▶ Observe overhead electrical and other utility lines. Be sure equipment will clear them. When digging, call your local utilities for location of buried utility lines, gas, water, and sewer, as well as any other hazard you may encounter.
- ▶ Be careful when handling loose objects. Lifting too high, or rolling the bucket too far back, could result in these objects sliding backward down the arms onto the operator compartment.
- ▶ Never undercut a high bank. When working at the base of a bank, overhang, or stockpile, avoid dangers such as rock or earth slides, overhanging trees, or a cave-in, by proper job operation.
- ▶ When operating on slopes, drive up and down, not across. Avoid steep hillside operation, which could cause the prime mover to overturn. Consult your prime move operator's and safety manuals for maximum incline allowable.
- ▶ Reduce speed when driving over rough terrain, on a slope, or turning, to avoid overturning the prime mover.
- ▶ Before exiting the prime mover, lower the attachment to the ground, apply the brakes, turn off the prime mover's engine and remove the key.

#### TRANSPORTING THE ATTACHMENT

- ► Travel only with the attachment in a safe transport position to prevent uncontrolled movement. Drive slowly over rough ground and on slopes.
- ▶ When transporting on a trailer: Secure attachment at recommended tie down locations using tie down accessories that are capable of maintaining attachment stability.
- ▶ When driving on public roads use safety lights, reflectors, Slow Moving Vehicle signs etc., to prevent accidents. Check local government regulations that may affect you.
- ▶ Do not drive close to ditches, excavations, etc., cave in could result.

#### **MAINTAINING THE ATTACHMENT**

- ▶ Before performing maintenance lower the attachment to the ground, apply the brakes, turn off the engine and remove the key.
- ▶ Do not perform any work on the attachment 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, check for correct functioning of the attachment. If not functioning properly, shut down the machine, follow proper Lock-Out / Tag-Out procedures and tag "DO NOT OPERATE" until all problems are corrected.
- ▶ Worn, damaged, or illegible safety decals must be replaced. New safety decals can be ordered from Paladin.



▶ Do not work under raised boom arms or attachment without supporting them. Do not use support material made of concrete blocks, logs, buckets, barrels, or any other material that could suddenly collapse or shift positions. Make sure support material is solid, not decayed, warped, twisted, or tapered. Lower booms to ground level or on blocks. Lower booms and attachments to the ground before leaving the cab or operator's station.



#### **WARNING!**

#### **REMOVE PAINT BEFORE WELDING OR HEATING**

Hazardous fumes/dust can be generated when paint is heated by welding, soldering or using a torch. Do all work outside or in a well ventilated area and dispose of paint and solvent properly. Remove paint before welding or heating.

When sanding or grinding paint, avoid breathing the dust. Wear an approved respirator. If you use solvent or paint stripper, remove stripper with soap and water before welding. Remove solvent or paint stripper containers and other flammable material from area. Allow fumes to disperse at least 15 minutes before welding or heating.

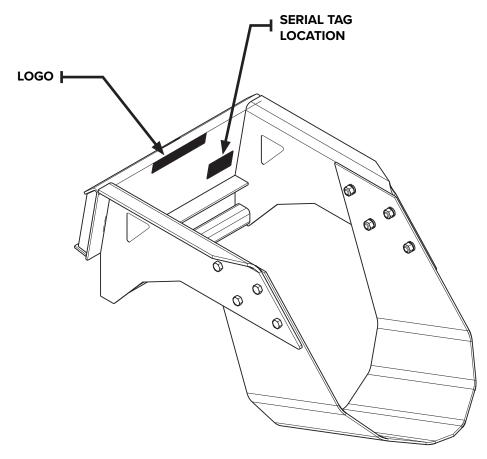
# THIS PAGE IS INTENTIONALLY BLANK

## **Decals**

**Decal Placement** 

#### **GENERAL INFORMATION**

The diagram on this page show the location of the decals used on your attachment. 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 attachment. They contain information you need to know for both safety and product longevity.



NOTE

Contact your local dealer for model number and logo decals

#### **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, free of charge, from your local dealer or Paladin.

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.

## Installation

#### **GENERAL INFORMATION**

The following instructions will help you to mount the power shovel onto your prime mover. The power shovel bucket uses the quick-attach system for ease of installation. Therefore, if you know how to attach your loader bucket, attaching the power shovel should prove no problem.

Remember to read all safety warnings, decals and operating instructions before operating the rock bucket. 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 and the prime mover thoroughly before beginning installation, operation, or maintenance.

FOLLOW ALL SAFETY INSTRUCTIONS IN THIS MANUAL AND THE PRIME MOVER'S MANUAL(S).

#### **INSTALLATION**

- 1. Remove any attachment from the front of the prime mover.
- 2. Following all standard safety practices and the instructions for installing an attachment in your prime mover operator's manual, install the attachment onto your prime mover.



#### **WARNING!**

To avoid serious personal injury, make sure the attachment is securely latched to the attachment mechanism of your unit. Failure to do so could result in separation of the attachment from the prime mover.

#### **DETACHING**

Follow your prime mover operator's manual for detaching (removing) an attachment.



# **Operation**

#### **INTENDED USE**

The power shovel was designed and built for digging holes for tree or shrub planting, cutting swales, digging out small stumps or rocks. 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.

#### **OPERATION**

Read all safety precautions before operating your new attachment.

For personal safety, lower the attachment to the ground, set the parking brake, shut off engine, and remove key before getting off of your prime mover.



#### **WARNING!**

There may be buried power, gas, and/or utility lines in the work area that may cause electrocution or an explosion. Have the work area marked for buried lines and do not dig in the marked areas. If a utility line has been damaged, contact the affected utility at once. Failure to do so could result in serious injury or death.

#### **STORAGE**

- ► Clean the unit thoroughly, removing all snow, mud, dirt, and grease.
- ▶ Inspect for visible signs of wear, breakage, or damage. Order any parts required and make the necessary repairs to avoid delays upon removal from storage.
- ▶ Tighten loose nuts and capscrews.
- Replace safety decals that are damaged or in unreadable condition.
- Store unit in a dry and protected place. Leaving the unit outside will materially shorten its life.

#### **Additional Precautions for Long Term Storage:**

Touch up all unpainted surfaces with paint to prevent rust.

#### **REMOVAL FROM STORAGE**

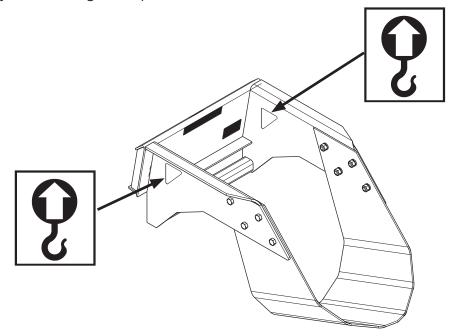
Wash unit and replace any damaged and/or missing parts.

# **Operation**

#### **LIFT POINTS**

Lifting points are identified by lifting decals where required. Lifting at other points is unsafe and can damage attachment. Do not attach lifting accessories around cylinders or in any way that may damage hoses or hydraulic components.

- Attach lifting accessories to unit at recommended lifting points.
- ▶ Bring lifting accessories together to a central lifting point.
- ▶ Lift gradually, maintaining the equilibrium of the unit.



### **WARNING!**

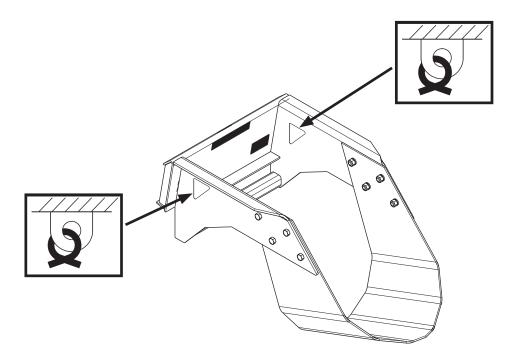
Use lifting accessories (chains, slings, ropes, shackles and etc.) that are capable of supporting the size and weight of your attachment. Secure all lifting accessories in such a way to prevent unintended disengagement. Failure to do so could result in the attachment falling and causing serious personal injury or death.

#### **TIE DOWN POINTS**

Tie down points are identified by tie down decals where required. Securing to trailer at other points is unsafe and can damage attachment. Do not attach tie down accessories around cylinders or in any way that may damage hoses or hydraulic components. See Diagram

- ▶ Attach tie down accessories to unit as recommended.
- Check unit stability before transporting.





### $\Lambda$

#### **WARNING!**

Verify that all tie down accessories (chains, slings, ropes, shackles and etc.) are capable of maintaining attachment stability during transporting and are attached in such a way to prevent unintended disengagement or shifting of the unit. Failure to do so could result in serious personal injury or death.

#### **TRANSPORTING**

Follow all local government regulations that may apply along with recommended tie down points and any equipment safety precautions at the front of this handbook when transporting your attachment.

## **Maintenance**

#### **GENERAL INFORMATION**

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

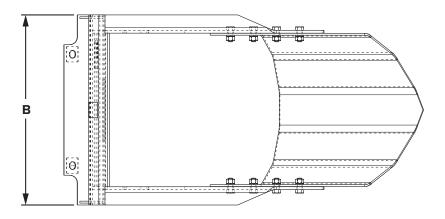
Procedure	Every 8 Hours (Daily)
Check for missing or loose hardware. Replace or tighten as necessary. See bolt torque specifications	<b>✓</b>
Inspect attachment for any worn parts or cracked welds. Repair as required.	<b>✓</b>

# **Tool Disposal**

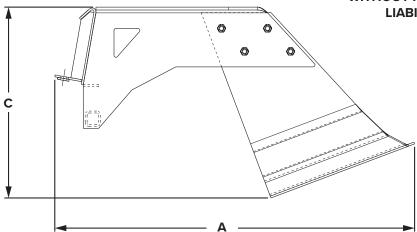
### **Tool Body**

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

# **Specifications**



**SPECIFICATIONS AND DESIGN** ARE SUBJECT TO CHANGE WITHOUT NOTICE AND WITHOUT LIABILITY THEREFOR.



Power Shovel - Mini Loader						
DESCRIPTION	#2000867					
A. Overall Length	46.85"					
B. Overall Width	24.75"					
C. Overall Height	24.85"					
Weight (lbs)	165#					

# **Bolt Torque**

# **Specifications**

#### **GENERAL TORQUE SPECIFICATION TABLES**

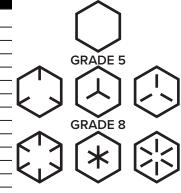
Use the following charts when determining bolt torque specifications when special torques are not given. Always use grade 5 or better when replacing bolts.

#### SAE BOLT TORQUE SPECIFICATIONS

#### **IMPORTANT**

The following torque values are for use with extreme pressure lubricants, plating or hard washer applications Increase torque 15% when using hardware that is unplated and either dry or lubricated with engine oil.

Bolt Size		SAE GRADE 5 TORQUE POUNDS FEET NEWTON-METERS			SAE GRADE 8 TORQUE POUNDS FEET NEWTON-METERS				
Inches	Millimeters	UNC	UNF	UNC	UNF	UNC	UNF	UNC	UNF
1/4	6.35	8	9	11	12	10	13	14	18
5/16	7.94	14	17	19	23	20	25	27	34
3/8	9.53	30	36	41	49	38	46	52	62
7/16	11.11	46	54	62	73	60	71	81	96
1/2	12.70	68	82	92	111	94	112	127	152
9/16	14.29	94	112	127	152	136	163	184	221
5/8	15.88	128	153	174	207	187	224	254	304
3/4	19.05	230	275	312	373	323	395	438	536
7/8	22.23	340	408	461	553	510	612	691	830
1	25.40	493	592	668	803	765	918	1037	1245
1-1/8	25.58	680	748	922	1014	1088	1224	1475	1660
1-1/4	31.75	952	1054	1291	1429	1547	1700	2097	2305
1-3/8	34.93	1241	1428	1683	1936	2023	2312	2743	3135
1-1/2	38.10	1649	1870	2236	2535	2686	3026	3642	4103



**GRADE 2** 

BOLT HEAD IDENTIFICATION MARKS AS PER GRADE. NOTE: MANUFACTURING MARKS WILL VARY

#### METRIC BOLT TORQUE SPECIFICATIONS

#### NOTE

The following torque values are for use with metric hardware that is unplated and either dry or lubricated with engine oil. Reduce torque 15% when using hardware that has extreme pressure lubricants, plating or hard washer applications.







BOLT HEAD IDENTIFICATION MARKS AS PER GRADE.

Size of Bolt	Grade No.	Pitch (mm)	Pounds Feet	Newton-Meters	Pitch (mm)	Pounds Feet	Newton-Meters
Size of Boil	5.6	Pitter (IIIII)	3.6-5.8	4.9-7.9	FILCH (IIIII)	rounus reet	Newton-weters
М6	8.8	1.0	5.84	7.9-12.7		- -	-
MP		1.0			-	-	-
ŀ	10.9	-	7.2-10	9.8-13.6		-	-
	5.6		7.2-14	9.8-19		12-17	16.3-23
M8	8.8	1.25	17-22	23-29.8	1.0	19-27	25.7-36.6
	10.9	_	20-26	27.1-35.2		22-31	29.8-42
	5.6		20-25	27.1-33.9		20-29	27.1-39.3
M10	8.8	1.5	34-40	46.1-54.2	1.25	35-47	47.4-63.7
	10.9		38-46	51.5-62.3		40-52	54.2-70.5
	5.6		28-34	37.9-46.1		31-41	42-55.6
M12	8.8	1.75	51-59	69.1-79.9	1.25	56-68	75.9-92.1
	10.9		57-66	77.2-89.4		62-75	84-101.6
	5.6	]	49-56	66.4-75.9		52-64	70.5-86.7
M14	8.8	2.0	81-93	109.8-126	1.5	90-106	122-143.6
	10.9		96-109	130.1-147.7		107-124	145-168
	5.6	1	67-77	90.8-104.3		69-83	93.5-112.5
M16	8.8	2.0	116-130	157.2-176.2	1.5	120-138	162.6-187
	10.9		129-145	174.8-196.5		140-158	189.7-214.1
	5.6	1	88-100	119.2-136		100-117	136-158.5
M18	8.8	2.0	150-168	203.3-227.6	1.5	177-199	239.8-269.6
İ	10.9		175-194	237.1-262.9		202-231	273.7-313
	5.6	1	108-130	146.3-176.2		132-150	178.9-203.3
M20	8.8	2.5	186-205	252-277.8	1.5	206-242	279.1-327.9
	10.9		213-249	288.6-337.4		246-289	333.3-391.6

## **Parts**

In order to provide you with the most UP-TO-DATE part information, all parts for this attachment have been moved to our website at www.paladinattachments.com. Please use these diagrams and parts lists to locate replacement parts.

When servicing your attachment, remember to use only original manufacturer replacement parts. Substitute parts may not meet the standards required for safe, dependable operation.

To facilitate parts ordering when contacting the factory, please have the product control number (PCN or C/N) or model and serial number of your product ready to ensure that you receive the correct parts for your specific attachment.

The product control number, model and serial number for your attachment should be recorded in the space provided on the cover of this manual. This information may be obtained from the serial number identification plate located on your attachment.

#### **IMPORTANT**

Most daily and emergency parts orders (in stock) received by 10:30 A.M. (Eastern Standard Time) will be shipped UPS Ground the same day received. UPS Next Day orders must be received by 1:30 PM (Eastern Standard Time.)

#### SERVICE DEPARTMENT

(734) 996-9116 (800) 456-7100

#### For Fax and E-mail Orders

PLC\_Sales@paladinattachments.com (734) 996-9014

# Warranty

In order to provide you with the most UP-TO-DATE Warranty information, Paladin Warranty Statement and Warranty Procedures along with Warranty Registration and Claim Forms have been moved to our website at <a href="https://www.paladinattachments.com">www.paladinattachments.com</a>.



