Mini Excavator Cold Planer

Operation and Maintenance Manual





SATISFACTION

BLUE DIAMOND®

GUARANTEED

Register your
WARRANTY
within 30 days
of purchase



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Introduction: Owner Information

Thank you for your decision to purchase a Blue Diamond® Mini Excavator Cold Planer. To ensure maximum performance of your equipment, it is mandatory that you thoroughly study the Operator's manual and follow the recommendations. Proper operation and maintenance are essential to maximize equipment life and prevent personal injury.

Operate and maintain this equipment in a safe manner and in accordance with all applicable local, state, and federal codes, regulations and /or laws. Follow all on-product labeling and instructions.

Make sure that all personnel have read this Operator's Manual and thoroughly understand safe and correct operating, installation and maintenance procedures.

Blue Diamond is continually working to improve its products. Blue Diamond reserves the right to make any improvements or changes as deemed practical and possible without incurring any responsibility or obligation to make any changes or additions to equipment sold previously.

Although great care has been taken to ensure the accuracy of this publication, Blue Diamond makes no warranty or guarantee of any kind, written or expressed, implied or otherwise with regard to the information contained within this manual. Blue Diamond assumes no responsibility for any errors that may appear in this manual and shall not be liable under any circumstances for incidental, consequential or punitive damages in connection with, or arising from the use of this manual.

Keep this manual available for frequent reference. All new operators or owners must review the manual before using the equipment and annually thereafter. Contact your Blue Diamond Attachments Dealer for assistance, information, or additional copies of the manual. Contact www.bluediamondattachments.com or call 888-376-7027 for a complete list of dealers in your area.

Serial Number Location:

Please record attachment information in the space provided for future reference.



Model Number:
Serial Number:
Dealer Name:
Dealer Number:
Date of Purchase:

The Serial Number is located on the right side of the attachment, on the rear of the mount plate.

Always use your serial number when requesting information or when ordering parts.

NOTE: The directions left, right, front and rear, as mentioned throughout this manual, are as viewed from the operator's position.

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1. About this Manual

About this Manual

This manual contains information about the usage and maintenance required for the equipment. This document must be available for review by the operator before using the attachment to ensure proper safety, maintenance, and usage.

1.1 Hazard Notices Used in this Manual

The following hazard notices are used in this document:

NOTE: Notes are used to indicate important information. This information may be repeated in other areas of the manual.



The signal word IMPORTANT identifies procedures which must be followed to avoid damage to the machine.



CAUTION



The signal word **CAUTION** on the machine and in the manuals indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury. It may also be used to alert against unsafe practices.



WARNING



The signal word **WARNING** on the machine and in the manuals indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.



DANGER



The signal word **DANGER** on the machine and in the manuals indicates a hazardous situation which, if not avoided, will result in death or serious injury.

1.2 Servicing Drivetrain Components

Detailed repair of the drive train components such as the hydraulic motor and gearbox is not covered in this manual. Contact your Blue Diamond® dealer for information about repairing these components during the warranty period.

Any unauthorized work performed on these components during the warranty period may void your warranty.

2. Safety

2.1 General Safety

A careful operator is the best protection against accidents. Most accidents involving operators of industrial equipment are caused by failure to observe basic safety precautions. Know the equipment and worksite before you operate. Familiarize yourself with the safety precautions listed below.



WARNING



The following precautions must be observed for the safety of the operator and/or service personnel.

- Read and observe all safety information and decals on the excavator and attachment BEFORE operating the unit!
- 2. Refer to the SAFETY section of your excavator operator's manual and observe all safety recommendations set forth in the manual.
- 3. When loading, keep attachment as low to ramps and trailer as possible.
- Always lower the boom and stick fully before leaving the excavator seat.
- CAREFULLY inspect ALL hydraulic hoses and connections on a routine basis; always use a piece of cardboard when searching for leaks.
- BE SURE to exercise the MANDATORY SAFETY SHUTDOWN procedure on page 7, BEFORE proceeding with any work on the attachment.



WARNING



Never crawl under raised excavator attachment, boom, or stick.



WARNING



Never allow hands or feet near any working part of the attachment unless the mandatory safety shutdown procedure has been completed.



WARNING

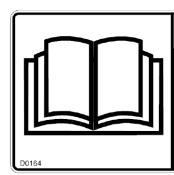


Never use your hands or other body part to check for hydraulic fluid leaks. Escaping fluid under pressure can penetrate the skin causing serious injury. If hydraulic fluid penetrates the skin, seek treatment from a doctor familiar with this type of condition or serious injury or death may result.

2.2 Safety Decals

The safety decals existing on the attachment should be clearly readable and always followed.

The READ MANUAL decal warns the operator to read this manual before operating the attachment.



A WARNING

READ MANUAL

Read manual before handling the machine observe instructions and safety rules when operating.

The ROTATING CUTTER decal warns the operator and bystanders to stay away during operation.



A WARNING

ROTATING CUTTER

Stay away during operation. Severe injury or death could result from being cut.

The FLYING OBJECTS decal warns the operator and bystanders to stay away during operation.



A WARNING

FLYING OBJECTS

Stay away during operation. Severe injury or death could result from flying objects.

The INJECTION HAZARD decal warns the operator and bystanders to stay away during operation.

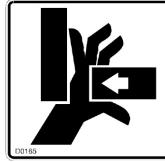


WARNING

INJECTION HAZARD

Stay away during operation. Severe injury or death could result from high pressure oil.

The CRUSHING HAZARD decal warns the operator and bystanders to stay away during operation.



A WARNING

CRUSHING HAZARD

Stay away during operation. Severe injury or death could result from crushing.

2.3 Safety Precautions

Before operating or conducting maintenance on this equipment, it is important to wear proper protection. Recommended safety equipment when operating and maintaining includes earplugs, eye protection, and a hard hat.

NOTE: Additional safety equipment may be required depending on the operating environment and worksite conditions.

Only qualified and trained personnel should operate, maintain, and service this attachment. Blue Diamond® recommends that you inspect this equipment regularly for leaks, cracks, or other conditions that may impair proper usage of the equipment. Verify that all repairs have been completed and inspected prior to using the attachment under load.

Accidents are Preventable

It is the responsibility of the user to follow all local, state, and federal safety regulations.

- · Call local utilities before you dig.
- Know the location of underground gas, water, and electrical lines.
- Inspect area for holes, drop-offs, or unstable ground.
- Know the weight limitations of operating surfaces and clearances.
- Remember: Safe operation begins with the operator!

Improper use of this equipment may result in personal injury, property damage, and/or damage to the equipment.

2.4 Mandatory Shutdown Procedure



WARNING



Before operating this equipment, the following safety information should be read and understood. In addition, each individual working with the equipment should be familiar with the safety precautions.



WARNING



Failure to follow the procedures before cleaning, adjusting, lubricating, or servicing this unit could lead to serious injury or death.

BEFORE cleaning, adjusting, lubricating, or servicing this unit, ALWAYS follow the MANDATORY SAFETY SHUTDOWN PROCEDURE:

- 1. Shut off the attachment by shutting off the auxiliary and high flow hydraulic output.
- If servicing the cutting teeth or adjusting the depth skis, roll the planer forward so teeth can be accessed or the skis can be adjusted. Lower the boom and stick completely.
- Move the excavator throttle to the slow idle position, shut the engine off, and remove the ignition key.
- 4. Keep the key with you at all times when working on the unit so no one can start the engine without your knowledge.

3.1 Initial Setup



WARNING



Read this entire manual as well as the decals on the attachment before attempting any maintenance, service, or setup of the unit.

Although the Blue Diamond® Cold Planer is supplied fully assembled, some simple checks should be performed before operation begins.

Safety Decals

The safety decals existing on the attachment should be clearly readable always followed. The descriptions of the decals are shown in the "Safety Decals" section 2.2 on page 6.

Hydraulic Couplers

The cold planer may have been shipped without the required hydraulic quick couplers. Obtain correct brand and size and install them on the hoses.

Hoses/Fittings

Hydraulic fittings are used to connect all attachment hoses. All fittings should be tight and free of hydraulic leaks. Hoses must be free of crimps or cuts that might result in leakage. Check your attachment before operation to make sure all hose routings are kink-free and allow for maximum movement of all extend, lift/lower, and/or swing motion required during normal operation.

Wire Harness

The wiring harness to the electro hydraulic valve block should be routed to prevent catching or pinching when side shifting, tilting, or lowering the drum fully into the cut.

Drum Assembly

For proper operation, picks must be installed in every holder on the drum.

3.2 Attaching to Excavator

To attach the unit to the excavator. Always refer to the operating instructions in the excavator manual. Always double check pin or coupler retention after attaching planer.

Next, connect the hydraulic hoses to the excavator quick couplers. Two hoses must be connected. Motor pressure and motor return.

⚠ IMPORTANT ⚠

All hoses should be free of kinks, cuts, or abrasions for safe operatiion. Do not operate if hoses are worn or damaged.

3.3 Setting Milling Depth

- Raise planer off the ground and follow the mandatory shutdown procedure in section 2.4 on page 7.
- Determine milling depth for each side of planer. For initial cuts, set both skis to the same depth. For secondary cuts, one skid can be set at zero depth if that skid is already in previously milled material.
- Depth can be set to the nearest 1" increment, by bolting the depth skis into different bolts.
 Use the depth decals on each side of the planer to determine correct bolt hole.
- Loosen front and rear bolts, remove rear bolt while holding rear of ski, move to new position. Reinstall rear bolt. Tighten front and rear bolts.

3. Operation

3.4 Milling

See the specifications on page 19 in this manual for minimum and maximum pressure and flow requirements.

The cold planer is a hydraulically powered attachment intended for cutting asphalt or concrete surfaces. The performance of the attachment can vary greatly depending upon how it is used and operated. The recommended operating procedures in this manual should be followed at all times for maximum productivity.



Insufficient hydraulic power will result in poor performance. Check pressure and flow per factory excavator specifications.

Before operating the attachment, read this entire manual. Follow all safety guidelines in this manual and safety decals on the unit. Make sure that all guards, shields, and decals are in place and in good condition prior to operation.

- Adjust milling depth see section 3.3 on page
 8.
- 2. Enter the excavator and fasten seat belt.
- 3. Make sure the area is clear of bystanders and other workers.
- Start the excavator and raise the planer.
 Engage the auxiliary hydraulic circuit at idle.
 Increase throttle to maximum engine speed.
- Extend boom and stick so planer is in the area to be milled. Tilt and lower planer so forward edge of depth skis are touching the pavement.
- Rotate planer slowly to lower milling drum in pavement until skis are on the pavement and level.
- Use boom and stick controls to slowly pull planer toward operator. Keep planer level on the ground.

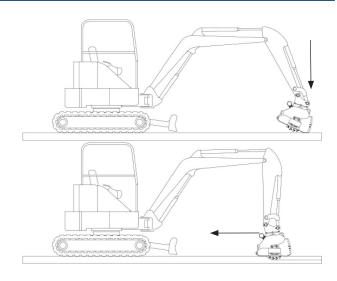


Figure 1

3.5 Maximizing Production

Production can vary greatly depending on milling depth, type of aggregate in the mix, ambient temperature, and condition of the cutting teeth.

Teeth should be inspected every 30 minutes and worn teeth replaced. Teeth should freely rotate in their holders. See the maintenance section beginning on page 12 for more information.

Optional teeth for milling concrete are available.

Only cut straight lines. Do not turn while milling. Cutting curves will quickly wear the edge picks, decreasing production. Milling a radius or curve can also damage the drum.

Planer hydraulic flow must have priority over boom and stick functions. Otherwise, planer motor will stop while boom or stick is moving.

4.1 General Maintenance



WARNING



Before performing any maintenance on the unit, perform the mandatory safety shutdown procedure.

Proper maintenance of the attachment will result in longer life and more productive and cost effective operation. There are two basic categories of maintenance: cutting drum maintenance and component lubrication.

4.2 Cutting Drum Maintenance

Cutting Drum maintenance is critical to extending the life of the pick and holder and overall production of the old planer. <u>Inspect the cutting drum every 30 minutes of operation.</u>

The factory installed carbide pick is a general purpose pick and is designed for milling both asphalt and concrete. Picks designed for extended periods of concrete cutting are available from the factory or your dealer.

Pick life varies with depth, density, material, aggregate and maintenance, which includes allowing the tooth to rotate. To maximize pick life, the picks must be free to rotate in the holder. The pick has two functions: serves as the consumable cutting tool and it protects the holder. The tooth must be free to rotate in the holder. If it locks up, then tooth and holder wear is greatly accelerated.

Edge teeth wear faster than center teeth, due to side loading of the drum during the excavator's swing operation.

To promote pick rotation, spray the picks daily with a water based asphalt emulsifier to break down asphalt emulsion. (Example: Zep's part #AR6690) If the pick remains in the holder beyond its intended replacement point, it reduces the cutting performance and will not protect the holder. If the picks are worn enough to indicate slight holder wear, replace the picks.

The pictures on page 12 show examples of excessively worn teeth.

Removing and Installing Teeth



WARNING



Never strike the pick on the carbide tip. The carbide can break or chip and cause injury.



WARNING



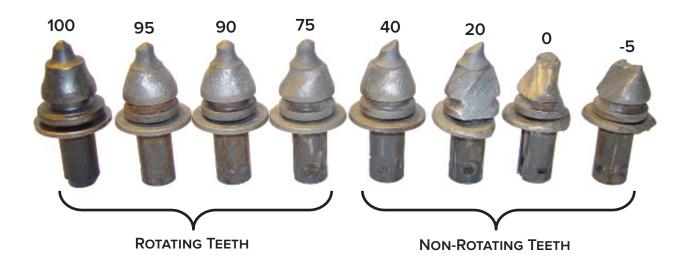
Always wear eye protection when performing this operation. Hardened tool and carbide picks can shatter causing injury.

A fork type pick tool is included with the cold planer and should be used to remove the picks from the holders. Insert the fork into the groove on the tool and strike the tool with a hammer. In the event the pick tool is not available, a punch may be inserted into the bottom of the holders and can be used to dislodge the pick.

For installation, the fork type tool should be inserted into the groove on the tooth and struck with a hammer. Also, if the tool is not available, a length of pipe with a 3/4 to 1 inch inside diameter can be placed over the pick to protect the carbide from a direct hit. Striking a small piece of wood placed on the pick to absorb the shock will also prevent damage.

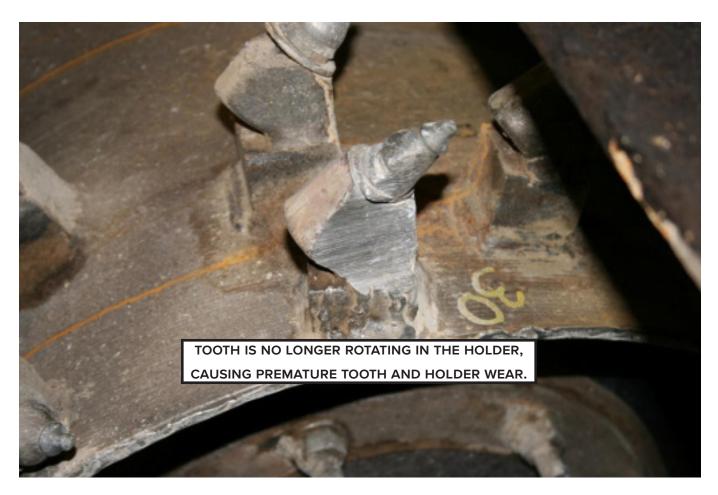
DO NOT STRIKE THE CARBIDE TOOTH TIP WHEN INSTALLING TEETH.

EXAMPLES OF REMAINING TOOTH LIFE (%)



TEETH MAY LAST TWICE AS LONG IF THEY ARE FREE TO ROTATE IN THEIR HOLDER.

THE FOLLOWING PICTURE SHOWS A TOOTH EXCESSIVELY WORN AND NOT ROTATING IN THE HOLDER.



4. Maintenance

Pick Holder Repair



WARNING



To avoid bearing damage, always ground directly to the drum before welding.

If a pick holder becomes worn, note the position and angle of the holder, cut the pick holder from the drumusing a torch or air-arc. Weld the new holder to the drum in the noted position.

Blue Diamond® does not warrant ANY ground engaging parts (drums, teeth, holders, or bases) against wear, unless the wear is determined by Blue Diamond® to have been caused by a manufacturing defect.

4.3 Cold Planer Lubrication



WARNING



Failure to follow the procedures before cleaning, adjusting, lubricating, or servicing this unit could lead to serious injury or death.

Always follow the Mandatory Safety Shutdown Procedure in section 2.4 on page 7 before performing **any** maintenance.

The Blue Diamond® Mini Excavator Cold Planer requires grease lubrication. The motor is lubricated by excavator hydraulic oil.

Grease Lubrication

All greased components should be greased with an EP Lithium NLGL No. 2 grade grease. One example is Mobilux EP2.

The dead shaft bearing grease zerk can be found on the right side of the chassis (Item 1) [Figure 2]. It should be greased daily or every 8 hours of operation.

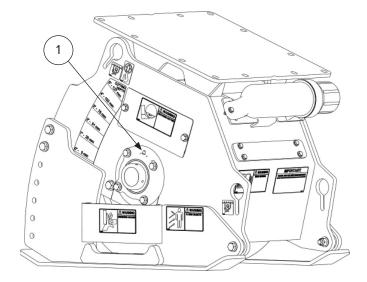


Figure 2

4. Maintenance

4.4 Drum Removal



WARNING



Exercise extreme caution during this operation to prevent tipping of the unit.



WARNING



Components are extremely heavy and can cause serious injury if proper lifting techniques are not used.

- Perform mandatory shutdown procedure found in section 2.4 on page 7 with the cold planer adjusted to the maximum depth. Ensure that planer drum is sitting on a stable surface and is chalked to prevent movement.
- 2. Suspend planer with hoist using labeled lift points.
- 3. Loosen and remove front and rear depth ski bolts. Remove left and right depth skis.
- 4. Remove 2 access covers above motor and bearing.
- 5. Remove 2 upper motor bolts and remove 2 motor support bolts. Circled in Figure 3.
- 6. Remove 2 upper bearing bolts and remove 2 bearing support bolts.
- 7. Slowly lift chassis from drum using hoist.



WARNING



If the drum does not remain on the floor, lower the planer chassis and shut the engine off. Check alignment of bearing, gearbox, and drum to chassis. Do not attempt to dislodge the drum while the planer frame is in the raised position. Never place hands or any part of your body in, around, or under the drum, as it may fall and cause serious injury.

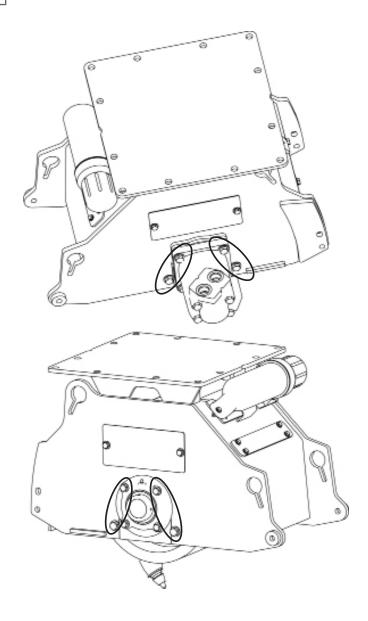
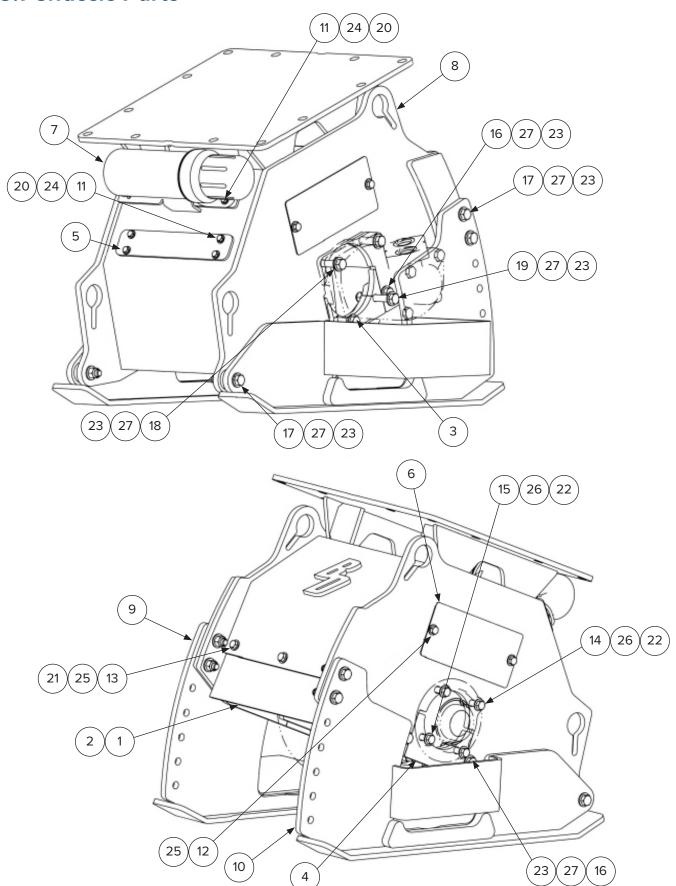


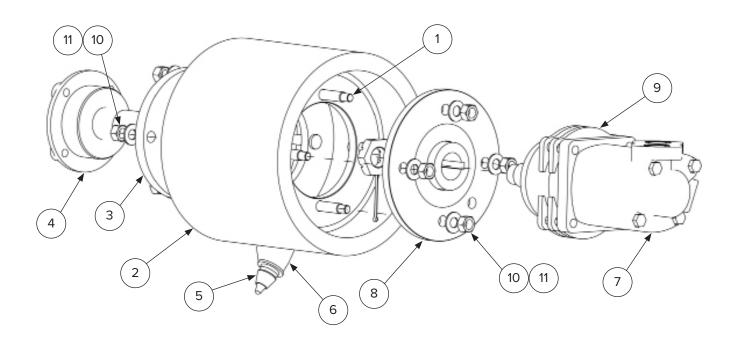
Figure 3

5.1 Chassis Parts



Belting, Rubber 260160 260161 1						
2 Plate, Belting Retainer 260162 260163 1 3 Weldment, Chassis Gusset 260164 1 4 Weldment, Chassis Gusset 260165 1 5 Water Spray Bar Cover 260166 1 6 Plate, Chassis Cover 260188 2 7 Tube, Manual Holder 260167 1 8 Weldment, Chassis 260168 260169 1 9 Weldment, Depth Skid 260170 1 10 Weldment, Depth Skid 260171 1 11 Bolt, 1/4-20 X 1.00 Plated 216403 7 12 Bolt, 3/8-16 X 1.50 Plated 216403 7 13 Bolt, 3/8-16 X 1.50 Plated 216465-1 3 14 Bolt, 3/8-16 X 1.50 Plated 216465-1 3 15 Bolt, 7/6-14 X 2.50 Plated 299452 2 15 Bolt, 1/2-13 X 2.50 Plated 299433 4 16 Bolt, 1/2-13 X 2.50 Plated 299433 4 17 Bolt, 1/2-13 X 3.50 Plated 299435 2 19		PARTS DESCRIPTION	160650	160670	QTY	
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10 Weldment, Depth Skid 260171 1 11 Bolt, 1/4-20 X 1.00 Plated 216403 7 12 Bolt, 3/8-16 X 0.75 Plated 299424 4 13 Bolt, 3/8-16 X 1.50 Plated 216465-1 3 14 Bolt, 7/16-14 X 2.00 Plated 299452 2 15 Bolt, 7/16-14 X 2.50 Plated 299443 2 16 Bolt, 1/2-13 X 2.00 Plated 299433 4 17 Bolt, 1/2-13 X 2.50 Plated 299444 6 18 Bolt, 1/2-13 X 3.00 Plated 299435 2 19 Bolt, 1/2-13 X 3.50 Plated 299436 2 20 Nut, 1/4-20 Plated Nylock 299615 7 21 Nut, 3/8-16 Plated Nylock 299615 7 21 Nut, 7/16-14 Plated Nylock 299617 4 22 Nut, 1/2-13 Plated Nylock 299617 4 23 Nut, 1/2-13 Plated Nylock 216490 14 24 Washer, 3/8 Narrow Plated 216446 10 26 Washer, 7/16 Narrow Plated 299716 8	8	Weldment, Chassis	260168	260169	1	
11 Bolt, 1/4-20 X 1.00 Plated 216403 7 12 Bolt, 3/8-16 X 0.75 Plated 299424 4 13 Bolt, 3/8-16 X 1.50 Plated 216465-1 3 14 Bolt, 7/16-14 X 2.00 Plated 299452 2 15 Bolt, 7/16-14 X 2.50 Plated 299443 2 16 Bolt, 1/2-13 X 2.00 Plated 299433 4 17 Bolt, 1/2-13 X 2.50 Plated 299434 6 18 Bolt, 1/2-13 X 3.00 Plated 299435 2 19 Bolt, 1/2-13 X 3.50 Plated 299436 2 20 Nut, 1/4-20 Plated Nylock 299615 7 21 Nut, 3/8-16 Plated Nylock 216447 3 22 Nut, 7/16-14 Plated Nylock 299617 4 23 Nut, 1/2-13 Plated Nylock 216490 14 24 Washer, 1/4 Narrow Plated 216405 14 25 Washer, 3/8 Narrow Plated 299716 8	9	Weldment, Depth Skid	260	170	1	
12 Bolt, 3/8-16 X 0.75 Plated 299424 4 13 Bolt, 3/8-16 X 1.50 Plated 216465-1 3 14 Bolt, 7/16-14 X 2.00 Plated 299452 2 15 Bolt, 7/16-14 X 2.50 Plated 299443 2 16 Bolt, 1/2-13 X 2.00 Plated 299433 4 17 Bolt, 1/2-13 X 2.50 Plated 299444 6 18 Bolt, 1/2-13 X 3.00 Plated 299435 2 19 Bolt, 1/2-13 X 3.50 Plated 299436 2 20 Nut, 1/4-20 Plated Nylock 299615 7 21 Nut, 3/8-16 Plated Nylock 216447 3 22 Nut, 7/16-14 Plated Nylock 299617 4 23 Nut, 1/2-13 Plated Nylock 216490 14 24 Washer, 1/4 Narrow Plated 216405 14 25 Washer, 3/8 Narrow Plated 216446 10 26 Washer, 7/16 Narrow Plated 299716 8	10	Weldment, Depth Skid	260	0171	1	
13 Bolt, 3/8-16 X 1.50 Plated 216465-1 3 14 Bolt, 7/16-14 X 2.00 Plated 299452 2 15 Bolt, 7/16-14 X 2.50 Plated 299443 2 16 Bolt, 1/2-13 X 2.00 Plated 299433 4 17 Bolt, 1/2-13 X 2.50 Plated 299444 6 18 Bolt, 1/2-13 X 3.00 Plated 299435 2 19 Bolt, 1/2-13 X 3.50 Plated 299436 2 20 Nut, 1/4-20 Plated Nylock 299615 7 21 Nut, 3/8-16 Plated Nylock 216447 3 22 Nut, 7/16-14 Plated Nylock 299617 4 23 Nut, 1/2-13 Plated Nylock 216490 14 24 Washer, 1/4 Narrow Plated 216405 14 25 Washer, 3/8 Narrow Plated 216446 10 26 Washer, 7/16 Narrow Plated 299716 8	11	Bolt, 1/4-20 X 1.00 Plated	2164	403	7	
14 Bolt, 7/16-14 X 2.00 Plated 299452 2 15 Bolt, 7/16-14 X 2.50 Plated 299443 2 16 Bolt, 1/2-13 X 2.00 Plated 299433 4 17 Bolt, 1/2-13 X 2.50 Plated 299444 6 18 Bolt, 1/2-13 X 3.00 Plated 299435 2 19 Bolt, 1/2-13 X 3.50 Plated 299436 2 20 Nut, 1/4-20 Plated Nylock 299615 7 21 Nut, 3/8-16 Plated Nylock 216447 3 22 Nut, 7/16-14 Plated Nylock 299617 4 23 Nut, 1/2-13 Plated Nylock 216490 14 24 Washer, 1/4 Narrow Plated 216405 14 25 Washer, 3/8 Narrow Plated 216446 10 26 Washer, 7/16 Narrow Plated 299716 8	12	Bolt, 3/8-16 X 0.75 Plated	299	299424		
15 Bolt, 7/16-14 X 2.50 Plated 299443 2 16 Bolt, 1/2-13 X 2.00 Plated 299433 4 17 Bolt, 1/2-13 X 2.50 Plated 299444 6 18 Bolt, 1/2-13 X 3.00 Plated 299435 2 19 Bolt, 1/2-13 X 3.50 Plated 299436 2 20 Nut, 1/4-20 Plated Nylock 299615 7 21 Nut, 3/8-16 Plated Nylock 216447 3 22 Nut, 7/16-14 Plated Nylock 299617 4 23 Nut, 1/2-13 Plated Nylock 216490 14 24 Washer, 1/4 Narrow Plated 216405 14 25 Washer, 3/8 Narrow Plated 216446 10 26 Washer, 7/16 Narrow Plated 299716 8	13	Bolt, 3/8-16 X 1.50 Plated	2164	216465-1		
16 Bolt, 1/2-13 X 2.00 Plated 299433 4 17 Bolt, 1/2-13 X 2.50 Plated 299444 6 18 Bolt, 1/2-13 X 3.00 Plated 299435 2 19 Bolt, 1/2-13 X 3.50 Plated 299436 2 20 Nut, 1/4-20 Plated Nylock 299615 7 21 Nut, 3/8-16 Plated Nylock 216447 3 22 Nut, 7/16-14 Plated Nylock 299617 4 23 Nut, 1/2-13 Plated Nylock 216490 14 24 Washer, 1/4 Narrow Plated 216405 14 25 Washer, 3/8 Narrow Plated 216446 10 26 Washer, 7/16 Narrow Plated 299716 8	14	Bolt, 7/16-14 X 2.00 Plated	299	299452		
17 Bolt, 1/2-13 X 2.50 Plated 299444 6 18 Bolt, 1/2-13 X 3.00 Plated 299435 2 19 Bolt, 1/2-13 X 3.50 Plated 299436 2 20 Nut, 1/4-20 Plated Nylock 299615 7 21 Nut, 3/8-16 Plated Nylock 216447 3 22 Nut, 7/16-14 Plated Nylock 299617 4 23 Nut, 1/2-13 Plated Nylock 216490 14 24 Washer, 1/4 Narrow Plated 216405 14 25 Washer, 3/8 Narrow Plated 216446 10 26 Washer, 7/16 Narrow Plated 299716 8	15	Bolt, 7/16-14 X 2.50 Plated	299	299443		
18 Bolt, 1/2-13 X 3.00 Plated 299435 2 19 Bolt, 1/2-13 X 3.50 Plated 299436 2 20 Nut, 1/4-20 Plated Nylock 299615 7 21 Nut, 3/8-16 Plated Nylock 216447 3 22 Nut, 7/16-14 Plated Nylock 299617 4 23 Nut, 1/2-13 Plated Nylock 216490 14 24 Washer, 1/4 Narrow Plated 216405 14 25 Washer, 3/8 Narrow Plated 216446 10 26 Washer, 7/16 Narrow Plated 299716 8	16	Bolt, 1/2-13 X 2.00 Plated	299	299433		
19 Bolt, 1/2-13 X 3.50 Plated 299436 2 20 Nut, 1/4-20 Plated Nylock 299615 7 21 Nut, 3/8-16 Plated Nylock 216447 3 22 Nut, 7/16-14 Plated Nylock 299617 4 23 Nut, 1/2-13 Plated Nylock 216490 14 24 Washer, 1/4 Narrow Plated 216405 14 25 Washer, 3/8 Narrow Plated 216446 10 26 Washer, 7/16 Narrow Plated 299716 8	17	Bolt, 1/2-13 X 2.50 Plated	299	299444		
20 Nut, 1/4-20 Plated Nylock 299615 7 21 Nut, 3/8-16 Plated Nylock 216447 3 22 Nut, 7/16-14 Plated Nylock 299617 4 23 Nut, 1/2-13 Plated Nylock 216490 14 24 Washer, 1/4 Narrow Plated 216405 14 25 Washer, 3/8 Narrow Plated 216446 10 26 Washer, 7/16 Narrow Plated 299716 8	18	Bolt, 1/2-13 X 3.00 Plated	299	299435		
21 Nut, 3/8-16 Plated Nylock 216447 3 22 Nut, 7/16-14 Plated Nylock 299617 4 23 Nut, 1/2-13 Plated Nylock 216490 14 24 Washer, 1/4 Narrow Plated 216405 14 25 Washer, 3/8 Narrow Plated 216446 10 26 Washer, 7/16 Narrow Plated 299716 8	19	Bolt, 1/2-13 X 3.50 Plated	299	299436		
22 Nut, 7/16-14 Plated Nylock 299617 4 23 Nut, 1/2-13 Plated Nylock 216490 14 24 Washer, 1/4 Narrow Plated 216405 14 25 Washer, 3/8 Narrow Plated 216446 10 26 Washer, 7/16 Narrow Plated 299716 8	20	Nut, 1/4-20 Plated Nylock	299	299615		
23 Nut, 1/2-13 Plated Nylock 216490 14 24 Washer, 1/4 Narrow Plated 216405 14 25 Washer, 3/8 Narrow Plated 216446 10 26 Washer, 7/16 Narrow Plated 299716 8	21	Nut, 3/8-16 Plated Nylock	216	216447		
24 Washer, 1/4 Narrow Plated 216405 14 25 Washer, 3/8 Narrow Plated 216446 10 26 Washer, 7/16 Narrow Plated 299716 8	22	Nut, 7/16-14 Plated Nylock	299	299617		
25 Washer, 3/8 Narrow Plated 216446 10 26 Washer, 7/16 Narrow Plated 299716 8	23	Nut, 1/2-13 Plated Nylock	2164	216490		
26 Washer, 7/16 Narrow Plated 299716 8	24	Washer, 1/4 Narrow Plated	2164	216405		
	25	Washer, 3/8 Narrow Plated	2164	216446		
27 Washer, 1/2 Narrow Plated 216427 28	26	Washer, 7/16 Narrow Plated	w Plated 299716			
	27	Washer, 1/2 Narrow Plated	216	427	28	

5.2 *Drivetrain Parts*

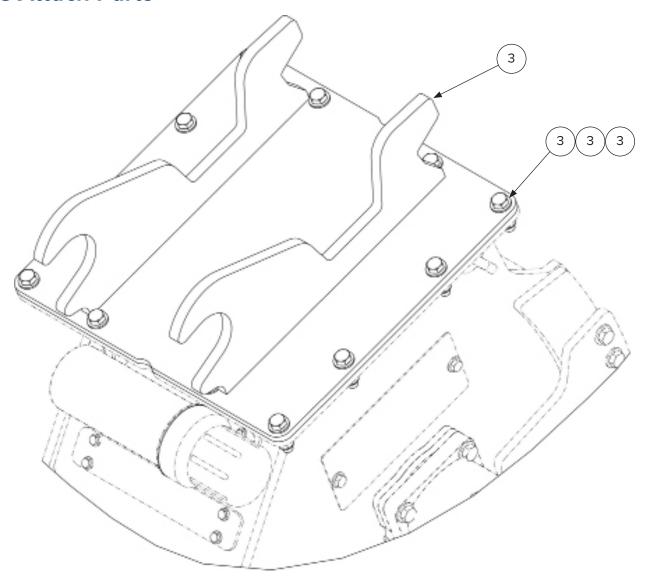


ITEM NO.	PARTS DESCRIPTION	160650	160670	QTY	
1	Bolt, 5/8-11 X 2.25 Rnd Hd, Rbd Neck	260	260172		
2	Assembly, Drum With Picks & Studs	260173	260830	1	
3	Weldment, Dead Shaft	260	0174	1	
4	Bearing, Dead Shaft	216479			
5	Pick, Asphalt	260001			
6	Holder, Pick	260003			
7	Motor, Drum Drive (Seal Kit: 260155)	260150			
8	Weldment, Machined Motor Hub	260152			
9	Plate, Motor Spacer	260153			
10	Nut, 5/8-11 Plated	ut, 5/8-11 Plated 299575 8			
11	Washer, 5/8 Narrow Plated 299844				

NOTE A: Quantity Varies. 160650: 30

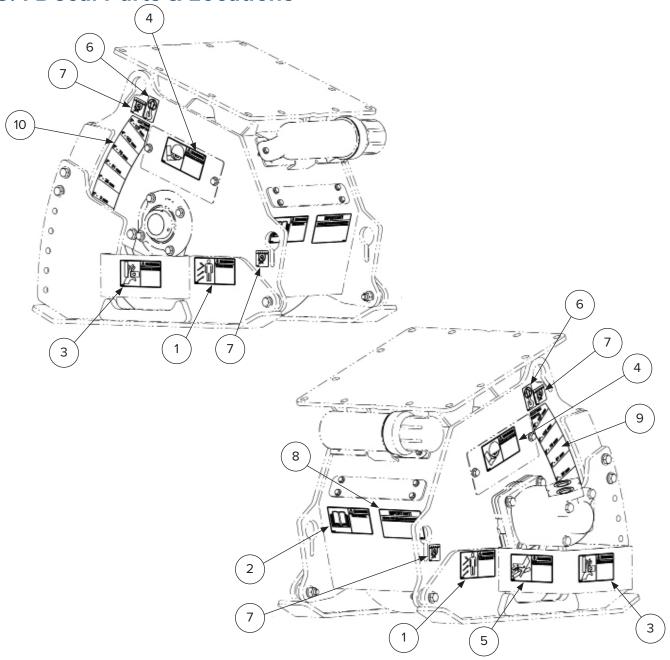
160650: 30

5.3 Attach Parts



ITEM NO.	PARTS DESCRIPTION	160650 160670	QTY
1	Mount Plate	Varies	1
2	Bolt, 1/2-13 X 2.00 Plated	299433	6
3	Nut, 1/2-13 Plated Nylock	216490	6
4	Washer, 1/2 Narrow Plated	216427	12

5.4 Decal Parts & Locations



ITEM NO.	PARTS DESCRIPTION	160650 160670	QTY
1	Decal, Flying Objects	260178	2
2	Decal, Read Manual	260179	1
3	Decal, Crushing Hazard	260180	2
4	Decal, Rotating Cutter	260181	2
5	Decal, Injection Hazard	260182	1
6	Decal, Lift Point	260183	2
7	Decal, Tie Down	260184	4
8	Decal, Tooth Maintenance	260185	1
9	Decal, Depth Indicator	260186	1
10	Decal, Depth Indicator	260187	1

6. Specifications

6.1 Attachment Specifications

DESCRIPTION	160650	160670	
Cutting Width (in)	12	16	
Cutting Depth (in)	0 – 5		
Number of Teeth	30	38	
Min. Hydraulic Flow (GPM) [Note A]	12		
Max. Hydraulic Flow (GPM)	20	29	
Min. Pressure (PSI)	3000		
Max. Pressure (PSI)	3500		
Approximate Weight (lb)	556	637	

NOTE A: Planer Flow must have priority over boom and stick functions. Otherwise, planer motor will stop while boom or stick is moving.

6. Specifications

6.2 Torque Specifications

Standard Hardware and Lock Nuts

BOLT TYPE	SAE GRADE 5		SAE GRADE 8		LOCK NUTS			
Nominal Size	Plated or Unplated Silver	Plated W/ ZnCr Gold	Plated or Unplated Silver	Plated W/ ZnCr Gold	Plated or Unplated Silver	Plated W/ ZnCr Gold	W/ Grade 5 Bolt	W/ Grade 8 Bolt
1/4	55 in / lb	72 in / lb	86 in / lb	112 in / lb	121 in / lb	157 in / lb	61 in / lb	86 in / lb
	(6.2 N•m)	(8.1 N•m)	(9.7 N•m)	(12.6 N•m)	(13.6 N•m)	(17.7 N•m)	(6.9 N•m)	(9.8 N•m)
5/16	115 in / lb	149 in / lb	178 in / lb	229 in / lb	250 in / lb	325 in / lb	125 in / lb	176 in / lb
	(13 N•m)	(17 N•m)	(20 N•m)	(26 N•m)	(28 N•m)	(37 N•m)	(14 N•m)	(20 N•m)
3/8	17 ft / lb	22 ft / lb	26 ft / lb	34 ft / lb	37 ft / lb	48 ft / lb	19 ft / lb	26 ft / lb
	(23 N•m)	(30 N•m)	(35 N•m)	(46 N•m)	(50 N•m)	(65 N•m)	(26 N•m)	(35 N•m)
7/16	27 ft / lb	35 ft / lb	42 ft / lb	54 ft / lb	59 ft / lb	77 ft / lb	30 ft / lb	42 ft / lb
	(37 N•m)	(47 N•m)	(57 N•m)	(73 N•m)	(80 N•m)	(104 N•m	(41 N•m)	(57 N•m)
1/2	42 ft / lb	54 ft / lb	64 ft / lb	83 ft / lb	91 ft / lb	117 ft / lb	45 ft / lb	64 ft / lb
	(57 N•m)	(73 N•m)	(87 N•m)	(113 N•m)	(123 N•m)	(159 N•m)	(61 N•m)	(88 N•m)
9/16	60 ft / lb	77 ft / lb	92 ft / lb	120 ft / lb	130 ft / lb	169 ft / lb	65 ft / lb	92 ft / lb
	(81 N•m)	(104 N•m)	(125 N•m)	(163 N•m)	(176 N•m)	(229 N•m)	(88 N•m)	(125 N•m)
5/8	83 ft / lb	107 ft / lb	128 ft / lb	165 ft / lb	180 ft / lb	233 ft / lb	90 ft / lb	127 ft / lb
	(112 N•m)	(145 N•m)	(174 N•m)	(224 N•m)	(244 N•m)	(316 N•m)	(122 N•m)	(172 N•m)
3/4	146 ft / lb	189 ft / lb	226 ft / lb	293 ft / lb	319 ft / lb	413 ft / lb	160 ft / lb	226 ft / lb
	(198 N•m)	(256 N•m)	(306 N•m)	(397 N•m)	(432 N•m)	(560 N•m)	(217 N•m)	(306 N•m)
7/8	142 ft / lb	183 ft / lb	365 ft / lb	473 ft / lb	515 ft / lb	667 ft / lb	258 ft / lb	364 ft / lb
	(193 N•m)	(248 N•m)	(495 N•m)	(641 N•m)	(698 N•m)	(904 N•m)	(350 N•m)	(494 N•m)
1	213 ft / lb	275 ft / lb	547 ft / lb	708 ft / lb	773 ft / lb	1000 ft / lb	386 ft / lb	545 ft / lb
	(289 N•m)	(373 N•m)	(742 N•m)	(960 N•m)	(1048 N•m)	(1356 N•m)	(523 N•m)	(739 N•m)



Warranty

MANUFACTURER'S LIMITED WARRANTY

BLUE DIAMOND® ATTACHMENTS, a manufacturer of quality attachments, warrants new BLUE DIAMOND® ATTACHMENTS products and/or attachments at the time of delivery to the original purchaser, to be free from defects in material and workmanship when properly set up and operated in accordance with the recommendations set forth by BLUE DIAMOND® ATTACHMENTS, LLC.

BLUE DIAMOND® ATTACHMENTS liability for any defect with respect to accepted goods shall be limited to repairing the goods at a BLUE DIAMOND® ATTACHMENTS designated location or at an authorized dealer location, or replacing them, as BLUE DIAMOND® ATTACHMENTS shall elect. The above shall be in accordance with BLUE DIAMOND® ATTACHMENTS warranty adjustment policies. BLUE DIAMOND® ATTACHMENTS obligation shall terminate twelve (12) months for the High Flow Cold Planer after the delivery of the goods to original purchaser.

This warranty shall not apply to any machine or attachment which shall have been repaired or altered outside the BLUE DIAMOND® ATTACHMENTS factory or authorized BLUE DIAMOND® ATTACHMENTS dealership or in any way so as in BLUE DIAMOND® ATTACHMENTS judgment, to affect its stability or reliability, nor which has been subject to misuse, negligence or accident beyond the company recommended machine rated capacity.

WARRANTY CLAIM

To submit a warranty claim, a claim must be filed with BLUE DIAMOND® ATTACHMENTS before work is performed. The BLUE DIAMOND® PRODUCT SUPPORT TEAM will advise repairs and applicable parts exchanges. Tampering with the failed part may void the warranty. This warranty does not include freight or delivery charges incurred when returning machinery for servicing. Dealer mileage, service calls, and pickup/delivery charges are the customers' responsibility.

EXCLUSIONS OF WARRANTY

Except as otherwise expressly stated herein, BLUE DIAMOND® ATTACHMENTS makes no representation or warranty of any kind, expressed or implied, AND MAKES NO WARRANTY OF MERCHANTABILITY IN RESPECT TO ITS MACHINERY AND/OR ATTACHMENTS ARE FIT FOR ANY PARTICULAR PURPOSE. BLUE DIAMOND® ATTACHMENTS shall not be liable for incidental or consequential damages for any breach or warranty, including but not limited to inconvenience, rental of replacement equipment, loss of profits or other commercial loss. Upon purchase, the buyer assumes all liability for all personal injury and property resulting from the handling, possession, or use of the goods by the buyer.

No agent, employee, or representative of BLUE DIAMOND® ATTACHMENTS has any authority to bind BLUE DIAMOND® ATTACHMENTS to any affirmation, representation, or warranty concerning its machinery and/or attachments except as specifically set forth herein.

This warranty policy supersedes any previous documents.

NOTE: Blue Diamond® Attachments is a trademark of BLUE DIAMOND® ATTACHMENTS



QUALITY | DEPENDABILITY | INTEGRITY

Blue Diamond® Attachments 4512 Anderson Road, Knoxville, TN 37918 888-376-7027