

Operation, Breakdown, and Troubleshooting Manual

24" Vacuum Floor Tool Talon 4 / Deublin

DO NOT USE OR OPERATE MACHINE UNTIL THIS MANUAL HAS BEEN READ AND FULLY UNDERSTOOD



Warning

Cancer and Reproductive Harm www.P65Warnings.ca.gov



ADVERTENCIA

Cáncer y Daño Reproductivo www.P65Warnings.ca.gov

SECTION SECTION GENERAL REORMATION GENERAL REORMATION

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INTRODUCTION 1.0

Welcome.....and congratulations on your purchase of the STEEL EAGLE Vacuum Spinner. This instructional manual has been designed as a guide for operating and servicing your Spinner.

Read this manual completely before operating this unit.

Proper operation and service are essential to the efficient functioning of the unit. When maintained correctly, this unit will have a long, trouble-free life.

The headings: CAUTION, WARNING, or NOTE are used to warn you that steps must be taken to prevent damage to the unit and/or personal injury. Make certain that you read al' instructions entirely before proceeding with the operation of the unit.

This operation and service manual is written specifically for the STEEL EAGLE Vacuum Spinner which is manufactured by:

STEEL EAGLE PO BOX 919 ELK POINT, SD 57025

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SAFETY 1.1



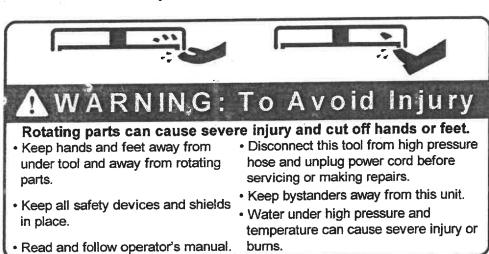
THIS SAFETY ALERT SYMBOL INDICATES IMPORTANT MESSAGES IN THIS MANUAL WHEN YOU SEE THIS SYMBOL, CAREFULLY READ THE MESSAGE THAT FOLLOWS AND BE ALERT TO THE POSSIBILITY OF PERSONAL INJURY OR

DEATH.

IMPORTANT

United States Government safety standards have been adopted under the Occupational Safety and Health Act. These standards particularly the General Standards, Part 1910, and the Construction Standards, Part 1926 should be consulted in connection with your use of airless spray equipment.

The following Warning Labels and Symbols are found on your Spinner and throughout this manual. These Labels and symbols point out important Warnings and Cautions which could result in fatality, personal injury to yourself and/or others, or property damage. Follow these instructions carefully! DO NOT remove these labels.





CHEMICALS ARE CORROSIVE TO OPERATOR AND EQUIPMENT. THOROUGHLY FLUSH EQUIPMENT AFTER USE. IF OPERATOR COMES IN CONTACT FLUSH AREA WITH CLEAN WATER AND SEEK MEDICAL TREATMENT.



Hourly Service Interval



Inspection Required

SAFETY 1.1 CONTINUED





We can not anticipate every possible circumstance that might involve potential hazard. The warnings, cautions and safety suggestions in this manual are therefore not all inclusive. If an operating procedure, installation, maintenance or work method not specifically recommended is used, you must satisfy yourself that it is safe for you and other persons. You must also ensure that the product will not be damaged or be made unsafe by the procedure that you chose.

WARNING: Fluids under high pressure spray can be nearly invisible and can penetrate the skin and

> cause extremely serious iniury!

If any fluid appears to have penetrated the skin, get emergency medical care at once! Do not treat as a simple cut. Tell the doctor exactly what fluid was injected. For treatment instructions, have your doctor call the:

National Poison Control Network (412) 681-6669

Never put hands or fingers over the spray jet(s) while in operation.

Never attempt to stop the rotating tubes and jets with your hands or any other object.

Never tip the Spinner backwards while in use.

Never attempt machine repairs or an adjustment while machine is hot.

Never alter or modify this equipment! Your personal safety as well as the safety of other persons is at stake.

Never use any caustic chemicals or solvents as serious damage to the rotating union may result. If chemicals are used, a thorough flushing with clean waters should immediately follow.

Never attempt to push machine over hose while tubes are spinning.

Never use the Spinner on any uneven surfaces as this could cause serious damage to the machine and the operator.

Always shut off the pressure washer and trigger the pressure gun to relieve system pressure before removing the spray jets or before performing any machine service.

Never operate the machine if any vibration is present.

Never run over trash, bags, cups, paper or other debris.

Never go over fractured or uneven surfaces.

Always wear full eye protection, protective clothing, gloves and rubber boots when operating the machine to protect yourself from burns caused by hot spray, fluid injection or debris dislodged by high pressure spray.

SAFETY 1.1 CONTINUED

Always operate the machine on level and horizontal surfaces. Never try to use machine on vertical pitched surfaces such as walls or roofs.

Always replace spray jets with factory authorized replacements when necessary.

Never leave an operating machine unattended. Always shut off the machine and relieve pressure before leaving the machine.

Do not attempt repairs or modifications you do not understand. Contact your servicing dealer or contractor.

Never exceed the factory pressure or temperature rating of the Spinner.

Never operate the Spinner unless the orifice size of a spray jet in the Spinner, multiplied by the number of spray jets in use by the Spinner, is equal to or greater than that required to operate the pressure washer at its manufacturer's rated specifications.

Never operate the Spinner with different orifice size spray jets.

Never operate the Spinner if one or more spray jets are plugged or if spray tubes are damaged.

Never allow the Spinner to operate in one spot for extended lengths of time. Damage to the surface may occur.



Discharge Hose Warning

The discharge hose supplied with the machine is designed for use on high pressure cleaners and accessories. Special care, handling and maintenance are required to provide proper and safe operation. The following guidelines must be followed to ensure safe operation and provide the maximum hose service life.

Do not route hose in a manner that will cause sharp bending, kinking, cutting, abrasions or other exterior damage.

Do not use the hose if cuts, leaks, abrasions, bulges or coupling damage is evident.

Do not attempt field repairs through an unauthorized hydraulic hose repair shop. Special couplings and crimping specifications are required for steam and high pressure washer discharge hose. Contact a qualified pressure washer service representative for repair of damaged hose.

Always examine hose couplings and quick disconnect before each operation. If leaking is evident, do not use. Contact a qualified pressure washer service representative.

SPECIFICATIONS 1.2

PRESSURE VACUUM MAX. FLOW MIN. RECOMMENDED PRESSURE MIN. RECOMMENDED FLOW MAX. TEMPERATURE RPM CLEANING PATH WIDTH HEIGHT (TO TOP OF HANDLE) (TO TOP OF COWLING) APPROX. WEIGHT	4000 PSI 275 CFM 6 GPM 1500 PSI 3 GPM 210° F 2000 23" 25 1/2" 66" 6"

SET-UP & OPERATION

2.0 MACHINE INSPECTION & SET UP	Pg. 8
2 1 OPERATING TIPS & PROCEDURES	Pg. 9

MACHINE INSPECTION & SET-UP 2.0

Machine Delivery Inspection

Examine the shipping carton and machine carefully for any hidden damage during shipping. Claims for damage or shortage should be filed with the contract carrier. Remove all loose parts and strapping attached to the machine for shipping purposes.

Machine Use

The Spinner is designed to be used in conjunction with a hot or cold high pressure washer to quicken the cleaning of large level surfaces. It is not designed for use on vertical or pitched surfaces such as walls or roofs.

IMPORTANT: The Spinner is supplied with (2) 15 degree #2.5 orifice spray jets. Be sure that this size is compatible with the flow and pressure specifications of your pressure washer. Never allow the Spinner to be used if the orifice size in the Spinner, multiplied by the number of arms in use, (in this case 2 #2.5 orifices equal a #5) is less than the orifice size required to operate the pressure washer at its manufacturers specifications. Serious personal injury as well as damage to the pressure washer may result if over pressurization occurs.

Machine Assembly & Set-up

Upon removal of your Spinner from its shipping carton locate the handle assembly and attach to spinner deck with (2) 3/8 x 1" Hex Head Cap Screws provided. Attach the vacuum hoses to the return ports using hose clamps provided.

Machine Start-up and Use



Machine under high pressure. Check all hose connections for tight fit prior to starting up machine

OPERATING TIPS AND PROCEDURES 2.1

Identify the surface that is to be cleaned.

1. There are many different types of surfaces that can be cleaned with the Spinner. Therefore it is very important that before you begin, you properly identify the surface that is to be cleaned. Each surface has its own characteristics that must be taken into account. A typical example would be the difference between a multi-level parking garage and a cement patio. Both are cement, but the parking garage cement typically is three times as strong as the patio. Therefore, if you are using a very high pressure washer, damage to the softer concrete may result. In order to avoid what could be a costly mistake always perform thorough identification and inspection procedures.

There are a number of other items that you must be aware of when inspecting the job site. Potential problems must be identified before beginning work, such as cracked or fractured surfaces, anchor bolts, holes, rocks, uneven surfaces, etc. Any one of these can cause damage to the Spinner. Therefore, it is recommended that you identify potential problem areas and mark them so that you can avoid damage to your Spinner.

Identify the type of soil to be removed.

2. In order to maximize the performance of the Spinner, you must properly identify the type of soil that is to be removed. Typical sidewalk soils, such as gum, soda

pop, candy and food would require minimal chemical preparation as opposed to degreasing a parking space which would typically require a presoaking with an industrial degreaser.

No matter what the circumstances are, thorough identification is important.

Determine if a chemical is necessary and if so, which chemical is right for the job.

3. Once you have determined the type of surface and soil, you must determine if a chemical treatment is necessary. If a chemical is in fact necessary to loosen soil, be sure to include it in the test patch which will be discussed in tip no. 5. Once again it is very important to identify the soil and prepare the surface with the proper chemical, as this will assist you in maximizing the performance of the Spinner.

Chemical application

4. There are two methods of applying chemicals to surfaces. The most common method is by utilizing a Hudson sprayer. This method allows the highest concentration of chemical to be applied directly to the soil. The second method is by pumping the chemical through the Spinner forcing the chemical onto the soil under high pressure. Either method is acceptable and results will vary from job to job. If you choose to run chemical through the Spinner. you must flush the system for at least 5 minutes with clean water in order to make certain that there is no chemical remaining in the union. Failure to thoroughly clean the system can cause substantial damage to the union and void the

OPERATING TIPS AND PROCEDURES 2.1 CONTINUED

warranty. The use of any acids through the Spinner also voids the warranty.



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Perform a test patch.

5. Once you have all the information necessary to proceed, pick a small inconspicuous area to perform a test patch. When choosing the test area, make certain that it is consistent with the general area to be cleaned. Next, connect the high pressure hose from the Spinner to the port of the trigger gun. Pull the trigger to establish flow. With a smooth and steady motion, walk slowly forward approximately 5 feet. Release the trigger assembly and inspect the surface.

REMEMBER: You must include all factors when performing a test. Do not forget to turn on the burner if using hot water. Also apply chemical if inspection determined it is necessary.

Establish cleaning pattern.

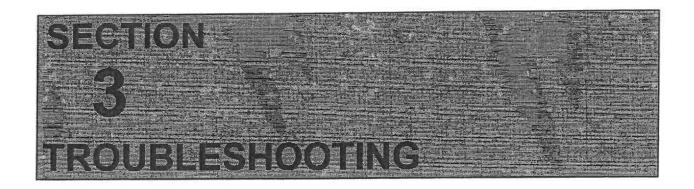
6. Just as you would create a pattern when mowing a lawn, you should create a pattern with the Spinner. There are several factors that you must take into consideration when determining the starting point.

- A.) Establish a pattern that allows water to flow away from the immediate work area. This will eliminate as much standing water as possible.
- B.) If possible, start at the highest point and work toward the lowest point. Do not attempt to operate the Spinner through standing water as the effectiveness of the spray is dramatically reduced and possible damage to the Spinner could result.

Helpful Hints:

- 1. Try and route the hose so it is always to your back. This will eliminate having to constantly move it out of the way.
- 2. As you complete your first pass, you will most likely turn around and parallel that path back to the starting point. If you turned to the left at the end of the first path, turn right at end of the second path. This will keep your hose from coiling up.
- 3. An in-line swivel between the hose and the inlet to the gun eliminates most of the coiling problems.

OPERATING TIPS AND PROCEDURES 2.1 CONTINUED



- 3.0 GENERAL TROUBLESHOOTING INFORMATION ____Pg. 12
- 3.1 TROUBLESHOOTING REMEDY GUIDE _____Pg. 13

GENERAL TROUBLESHOOTING INFORMATION 3.0



WARNING: Before attempting any repairs or maintenance, Be sure machine is shut off and disconnected

Troubleshooting

Troubleshooting is an organized study of the problem and a planned method or procedure for investigation and correction of the difficulty. The following troubleshooting guide includes some of the problems that you may encounter during the service life of the machine.

The troubleshooting guide does not give all the answers for correction of problems listed, but are meant to stimulate a train of thought and indicate a work procedure directed toward the source of the trouble.

THINK BEFORE ACTING

Study the problem thoroughly and ask yourself these questions:

- 1. What are the warning signs preceding the trouble?
- 2. What previous repair and maintenance work has been done?
- 3. Has a similar problem occurred before?
- 4. If the machine still runs, is it safe to continue operation to make further checks?

DO THE EASIEST THINGS FIRST

Most problems are simple and easily corrected.

Example: "Nozzles will not spin" complaint caused by plugged nozzles.

Always check the easiest and obvious things first. Following this simple rule will save time and trouble.

FIND AND CORRECT BASIC CAUSE OF TROUBLE

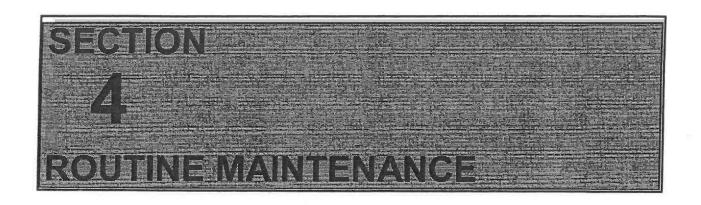
AFTER A MECHANICAL FAILURE HAS BEEN CORRECTED, BE SURE TO LOCATE AND CORRECT THE CAUSE OF THE PROBLEM SO THAT THE SAME FAILURE WILL NOT BE REPEATED.

The following page list some of the problems, causes and probable fixes the operator can study to become aware of what might cause the problem should it arise.

If the hints in this manual do not correct a problem, contact a dealer or authorized service representative. DO NOT attempt repairs you do not understand.

TROUBLESHOOTING REMEDY GUIDE 3.1

Problem	Problem Probable Cause Pos	
Machine vibrates	Plugged nozzle(s).	Remove nozzle, inspect for debris, remove obstruction, replace nozzle.
	2. Bent Tubes.	 Inspect manifold assembly for damaged tubes. Replace damaged tubes as necessary.
	3. Worn or damaged union.	Inspect union for play in the shaft. Replace union if necessary.
	4. Different size spray nozzles.	 Make sure the nozzles are of equal orifice size.
·	Wheels or wheel brackets are loose or damaged.	Inspect and repair as necessary.
2. Nozzle will not spin.	1. Plugged nozzle(s).	 Remove nozzle(s), inspect for debris, remove ob- struction, replace nozzle(s).
	2. Rotating union has failed.	Inspect union and repair or replace as necessary.
	3. No pressure to Spinner	Check for pressure at pressure washer.
3. Spinner will not move.	Debris has attached to wheels.	Inspect wheels for rock or other foreign object.
	2. Wheels are too high.	2. Adjust wheel height.
4. Uneven vacuum pattern.	Clogged vacuum ports	Remove shroud from deck and clean debris from underside of deck.



4.0 SERVICE & MAINTENANCE SCHEDULE _____Pg. 15

SERVICE & MAINTENANCE SCHEDULE 4.0



A Properly Maintained Machine Is A Safe Machine

It is the operators responsibility to make daily inspections of the machine for anything that could cause a potential service or safety problem.

Service & Maintenance

Preventative maintenance is the easiest and least expensive type of maintenance. The life of any machine depends on the care that it is given. Regular inspections of the machine's systems and critical components is the key to preventative maintenance. To prevent machine down time and prolong the life of your unit, follow these simple routines.



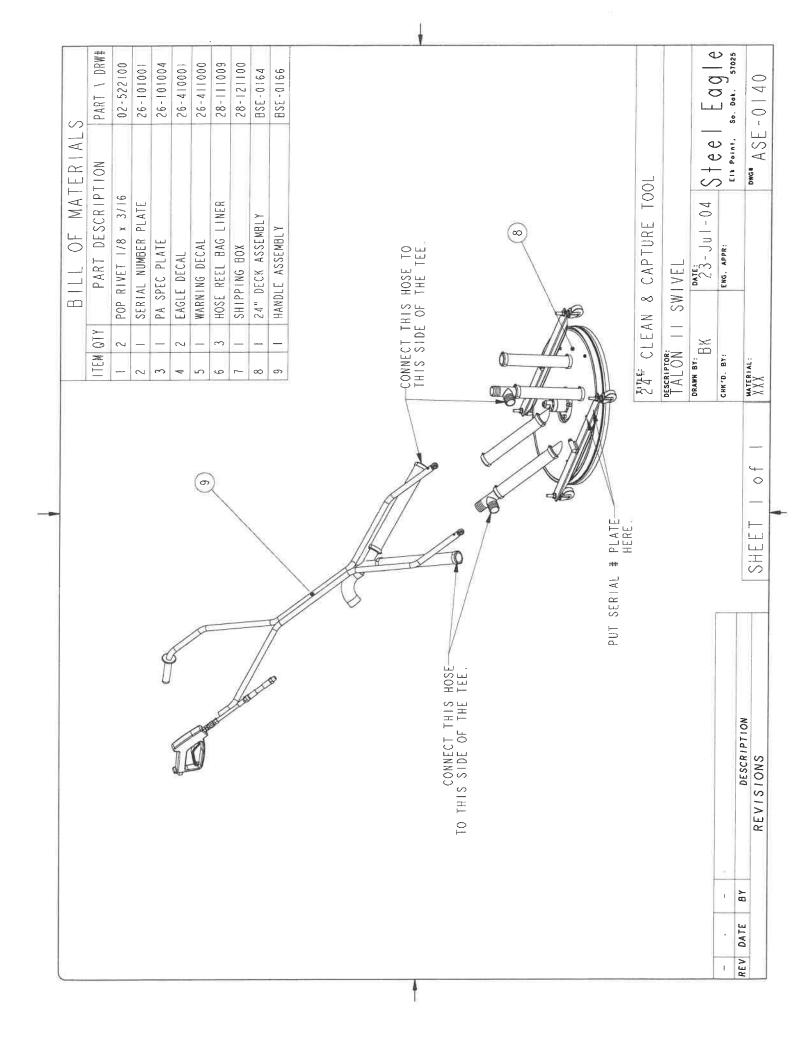
Daily

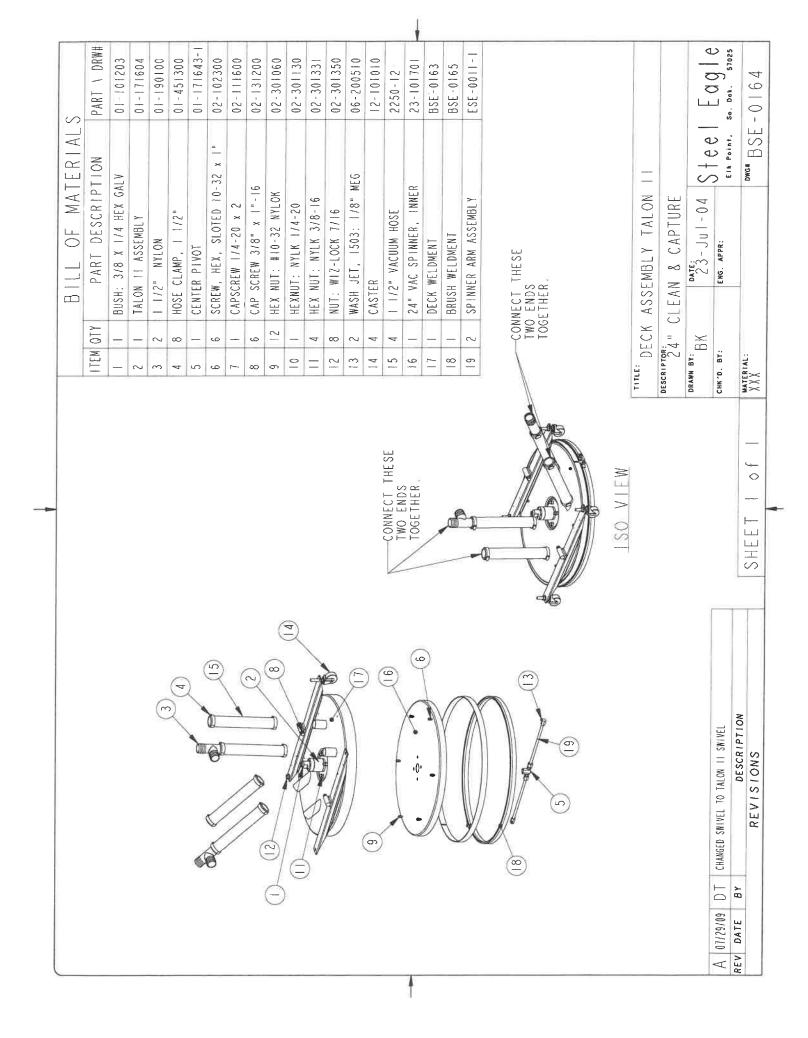
- Check spray tubes for bending or damage.
- Check wash nozzle for clogging or damage.

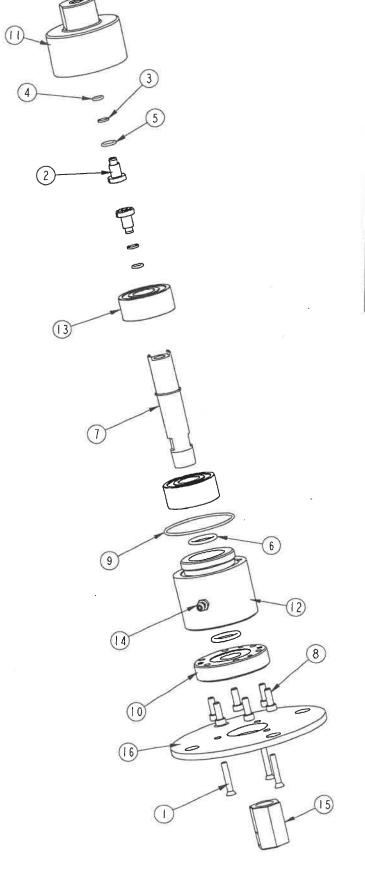


Weekly

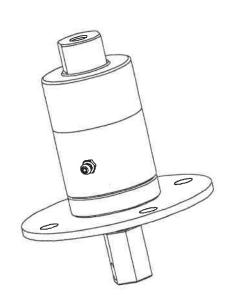
- Check pressure hose for wear or damage.
- Check quick couplers for leakage (if used).
- Check in-line swivel for leakage (if used).
- Check wheels and grease when necessary:







BILL OF MATERIALS					
ITEM	QTY	PART DESCRIPTION	PART \ DRW#		
T	3	I" COUNTER SINK SCREW	01-171604-17		
2	2	CARBIDE SEAL	01-171604-2		
3	2	BACKUP RING	01-171604-3		
4	2	SEAL O-RING	01-171604-4		
5	1	CARBIDE SEAL O-RING	01-171604-5		
6	2	HOUSING O-RING	01-171604-6		
7	I	TALON SHAFT	01-171607-10		
8	6	SOCKET HEAD SCREW	01-171607-11		
9	1	O RING FOR CAP	01-171607-12		
10	1	END CAP MOUNT	01-171607-7		
11	1	END CAP INLET	01-171607-8		
12	1	MAIN BODY	01-171607-9		
13	2	DOUBLE ROW BEARING	01-171615		
14	1	GREASE ZERK	01-171617		
15		CENTER PIVOT	01-171643-1		
16	1	UNION MTG. PLATE	23-202000		

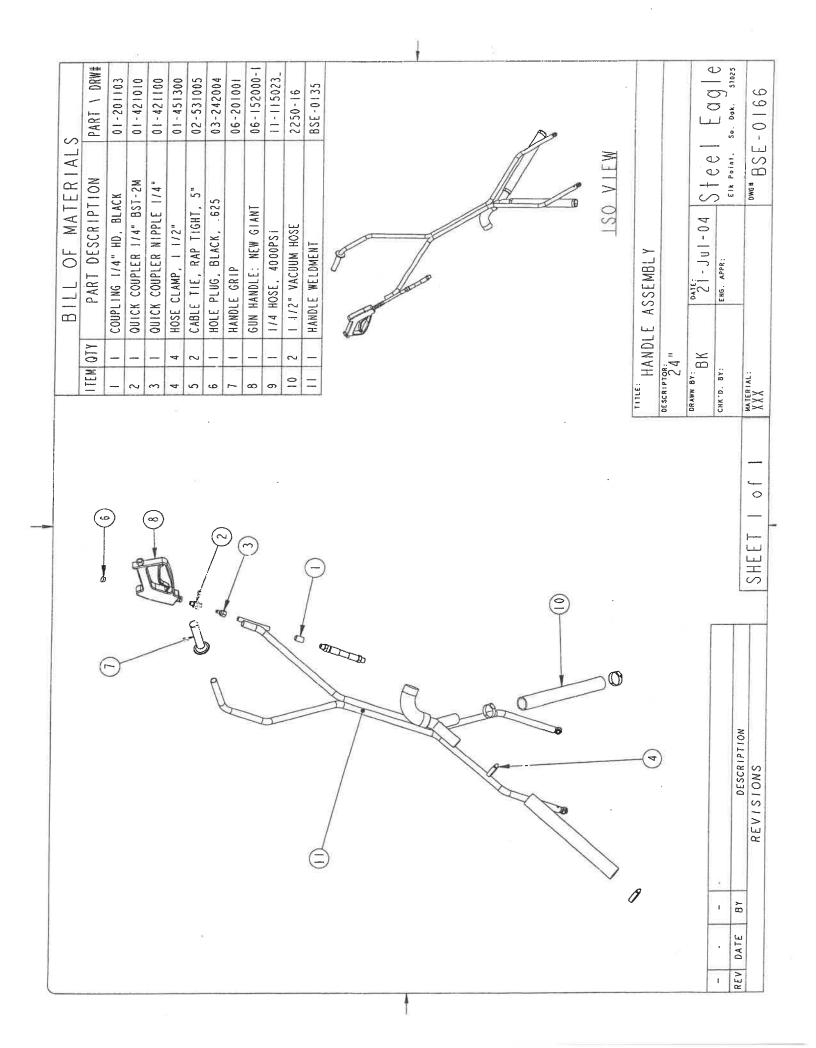


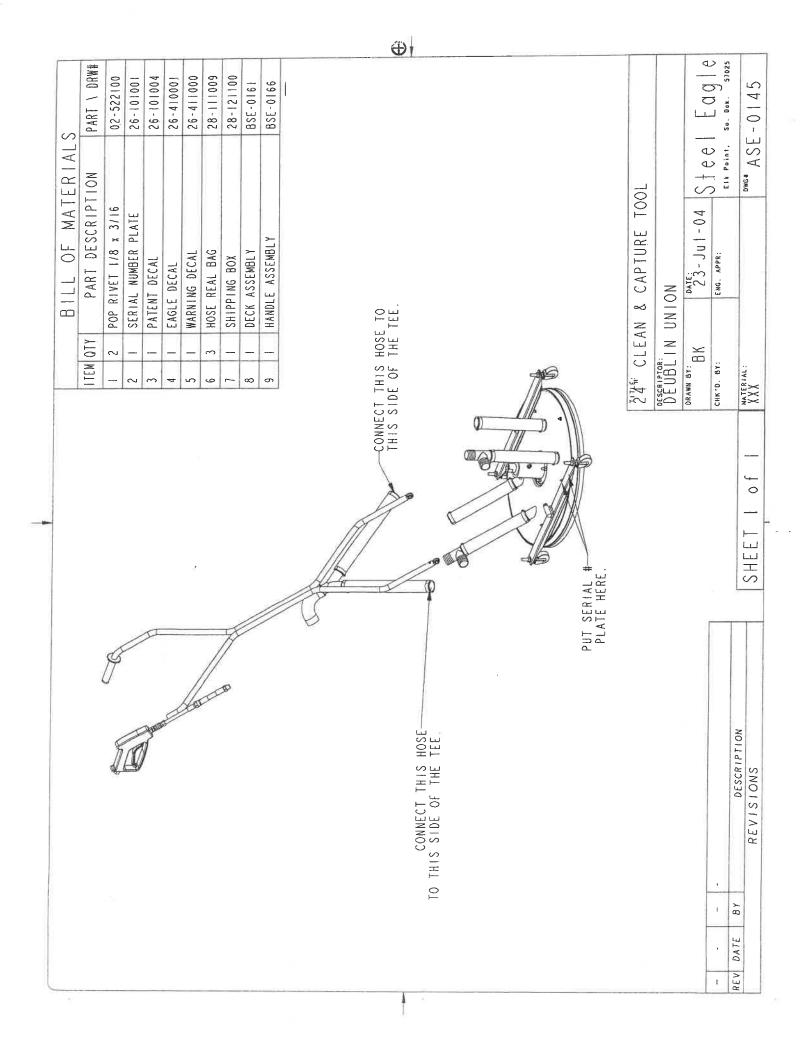
TALON 3 ASSEMBLY

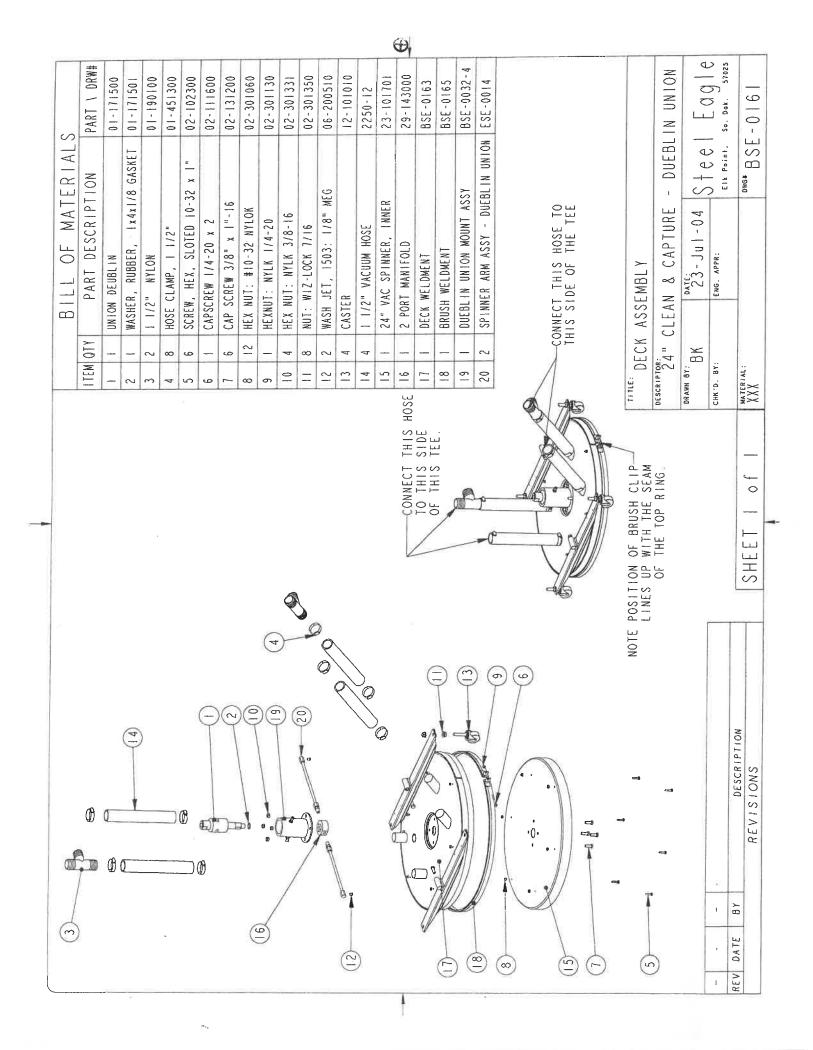
DESCRIPTION TALON SWIVEL W/ C&C LOW ADAPTER

DATE 16-Dec-09 DWG# 01-171607-2

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WARRANTY

We warranty each new unit and part sold by us to be free from manufacturing defects in normal service for a period of one (1) year commencing with delivery of the product to the original owner. Copy of the original bill of sale, including serial number must accompany claim.

Our obligation under this warranty is expressly limited at our option, to the replacement or repair at a facility designated by us, of such part or parts as inspection shall disclose to have been defective. This warranty does not apply to defects caused by damage or unreasonable use (including failure to provide reasonable and necessary maintenance) while in the possession of the customer. THIS WARRANTY DOES NOT APPLY TO HARDWATER DAMAGE, NOZZLE WEAR, PAINT OR IMPROPER CHEMICAL USE.

WE SHALL NOT BE LIABLE FOR CONSEQUENTIAL DAMAGE OF ANYTHING, including but not limited to, consequential labor costs or transportation charges in connection with the replacement or repair of defective parts.

ANY IMPLIED OR STATUTORY WARRANTIES, INCLUDING ANY WARRANTY OR MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, ARE EXPRESSLY LIMITED TO THE DURATION OF THIS WRITTEN WARRANTY. We make no other express warranty, nor is anyone authorized to make it on our behalf.

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