

# Barrel Handler Operation and Safety Manual





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# Safety Symbols & Equipment Signs



This is the safety alert symbol. When you see this symbol on your equipment or in this manual, be alert to the potential for personal injury or injury to others.

This symbol means to take notice. Following this symbol is useful and important information.



Before using your new machine, you and all other operators should completely read through this manual. Failure to fully understand how to operate this machine and take safety precautions could lead to serious injury and death.



These signs should remain on the machine always, DO NOT remove. If the signs ever become lost or damaged they should be replaced.





# **General Safety Instructions**



Read through entire manual.



Always keep the manual in a safe and easily accessible place.



It is the owner's responsibility to keep nuts and bolts tight and to maintain the machine as indicated in the operator's manual. Neglect or abuse of this machine may VOID warranty



Make sure to replace all missing or damaged decals.



Do not make unauthorized modifications to machine which could decrease its stability and life or cause injury and possibly death. We also encourage you to only use authorized replacement parts from EZ SPOT UR which were made specifically for this machine.



If there is any part of this guide you do not understand, please call EZ SPOT UR at 877-433-5733.



Never use alcohol or drugs while using this machine. Doing so could lead to serious injury or death.



Anyone under the age of 18 should not operate this machine.



This attachment does not exceed an equivalent continuous Aweighted sound pressure level of 70 dB(A)



Always wear relevant safety apparel. If using a skid steer with an open cab you should always wear safety glasses and protective head gear. You never know when debris will hit you.



## **Safety Features**

The following are safety features that come with the barrel handler:

Clamp Safety	The clamp hydraulic circuit is protected by a double check valve. This locks the cylinders in place so a tight clamp is maintained yet does not crush the barrels.
Rotation Safety	The rotation cycle has a mechanical stop to prevent the hydraulic cylinders from exceeding their maximum extension, which would cause the attachment to rotate too far and damage it.
Shaft Safety	The main rotating shaft is a 3.5 inch solid round 4140 Q&T shaft that is milled at the end down to 3 inches square to receive the attachments.
Hose Safety	All hydraulic hoses are Cordura protected to insure that leaks will not cause hydraulic injection when operating or performing maintenance on the attachment. The hoses have an operating pressure of 3000 psi and a burst pressure of 12000 psi.
	The spring hose kit insures that the hydraulic lines will not get pinched between the attachment and the machine. This helps reduce the possibility of catastrophic hydraulic fluid loss. The spring hose kit also keeps the hoses out of the dirt.
Decal Safety	All units have pictorial and written caution decals
Connection Safety	The quick attach plate has doublers at the pin holes to insure they will not tear out. There is also a bent gusset for the upper lip of the quick attach.



# **Specifications**

Hydraulic Recommendations	20-30 GPM @ 3000 psi
Hydraulic Connection Type	¾" Flush Face Coupling
Rated Burst Pressure for Hydraulic Connections	15 ksi (103.4 MPa)
Rated Weight Capacity <sup>1</sup>	1200 lbs (544 kg)

Hydraulic Cylinders ......See Chart Below

Ty Cyl	pe of linder	Quantity	Bore	Rod Diameter	Stroke	Push <sup>2</sup>	Pull <sup>2</sup>
Cla	amp	2	2 in 51 mm	1.00 in 25 mm	3.5 in 89 mm	9425 lbs 41.9 kN	7069 lbs 31.4 kN

Chain Base Hydraulic Motor ......See Chart Below

Displacement	Torque		Min. Starting Torque		Pressure	
Displacement	Continuous	Intermittent	@ Cont. Pressure	@ Int. Pressure	Continuous	Intermittent
9.7 in <sup>3</sup> /r	2059 lb-in	2824 lb-in	1650 lb-in	2590 lb-in	1650 APSI	2250 ∆PSI
159 cm <sup>3</sup> /r	233 Nm	319 Nm	186 Nm	262 Nm	114 ∆Bar	155 ∆Bar

Mass of Chain Base ......413 lbs (187 kg)

Mass of 55 Gallon Barrel Handler without a Base ......130 lbs (59 kg)

Rotation Angle .....0° - 300°

Mounting Method......Universal Quick Attach (Customizable)

Minimum Opening of Jaws ......20.21 in (513 mm)

1. Max Weight Capacity = Machine Operating Capacity – Weight of Attachment Should not exceed the rated weight capacity of the attachment

2. Push and Pull are based on 3000 psi at 20-30 GPM



## **Connecting the EZ SPOT UR Base to your Machine**



The skid steer or other machine must be equipped with a compatible standard universal quick mount hitch and front auxiliary hydraulics to connect and operate the machine. If the machine does not have a universal quick attach, (e.g. a machine with a pin on pin system) EZ SPOT UR can fabricate a mount that bolts on behind the quick attach on the base. Figure 1 shows an example of a bolt-on mount for a CAT 320C excavator.



Figure 1: Bolt-on mount for the CAT 320C on the chain base

The following are steps to attach the standard base to a machine with a universal quick attach:

1. With the engine completely shut down and the parking brake set, rotate the skid steer latch handles upward to the unlatched position. The latch handles must be completely raised to fully retract the hitch lock pins. See Figure 2.



Figure 2: Skid Steer with latch handles up



2. Start the skid steer and tilt the hitch mounting plate forward while guiding the mounting plate crest under the attachment saddle of the standard base. Raise and roll back the mounting plate until the base hitch plate is securely seated flat against the skid steer mounting plate as shown in Figure 3. Do not hit the latch handles on the EZ SPOT UR attachment.



Figure 3: EZ SPOT UR base attached to a skid steer

3. With the base fully supported by the skid steer boom, lower it to ground level. Slightly tilt the front of the base upward about 2" from ground level. Turn off the engine, set the parking brake, and exit the skid steer. Push both latch handles downward to engage the hitch pins into the base retaining tabs. Figure 4 shows the hitch pins in the retaining tabs. Now the base hitch is securely attached to the mounting plate of the skid steer as shown in Figure 5.



Figure 4: Pin locked into place in the EZ SPOT UR retaining tabs





The latch handles must be in the full locked position with the lock pins extending through the EZ SPOT UR frame. If the latch handles are not in the locked position, the attachment could come off the mount.



Figure 5: EZ SPOT UR attached to the skid steer with latch handles down



The skid steer must be equipped with an operator front protective door. Serious injury or death can result from falling objects hitting an unprotected operator.

## **Connecting the Barrel Handler to the EZ SPOT UR Base**

After the base is attached to the skid steer, the barrel handler will now slide onto the shaft on the base. To do this, line up the solid shaft on the base to the hollow receiver tube on the barrel handler as shown in Figure 6. Slowly drive the skid steer forward and slide the shaft into the receiver tube. If the shaft doesn't slide very easily, grease can be rubbed onto it to reduce friction. Slide the pin into the hole to lock the barrel handler onto the base as shown in Figure 7.







Figure 6: Assembling the barrel handler on the base



Figure 7: Locations for the pin and the bolt



## **Connecting the Hydraulic Lines**

- 1. Before you connect hydraulic lines to the skid steer, be sure that the hydraulic lines and quick couplers are of the same size and type.
- 2. With the skid steer completely shut down and secured in position and the EZ SPOT UR base resting at ground level, relieve auxiliary hydraulic pressure by moving the control levers back and forth several times.
- 3. When connecting the skid steer hydraulic lines to the attachment, keep hoses, quick couplers, and swivels free of contamination. Clean dirt and other debris from the connections with a clean rag to prevent contamination of the hydraulic oil.
- 4. Route the hoses through the spring mount kit on the EZ SPOT UR. Then connect the hydraulic hoses to the loader quick couplers. This is shown in Figure 8.



5. Connect the wire harness from the EZ SPOT UR to the loader.

Figure 8: Barrel handler with hydraulic lines connected to the quick couplers



## **Disconnecting the Barrel Handler from your Machine**

To remove the barrel handler from your machine, do the following:

- 1. Disconnect the wire harness from the loader. This is shown in Figure 8.
- 2. Disconnect the hydraulic hoses from the loader. The hoses are shown in Figure 8.
- 3. Pull the latch handles all the way up. The latch handles are shown in Figure 5.
- 4. Tilt the attachment forward and lower it to the ground. Slowly back away from the attachment.

## **Operating the Barrel Handler**

After thoroughly reviewing the safety manual and the attachment procedures are complete, your barrel handler is ready to use.



Do not attempt to pick up a barrel that is beyond the lifting capacity of the machine.

To pick up a barrel, do the following:

- 1. Approach the barrel with the jaws of the barrel handler horizontal to the ground.
- 2. Open the jaws of the barrel handler and maneuver the jaws around the barrel.
- 3. Clamp down on the barrel. The barrel will not be crushed as long as the barrel is a 55 gallon barrel and there are no inserts in the jaws of the barrel handler. The inserts are used to make the barrel handler close around smaller diameter barrels.
- 4. When it is secure, the barrel can be rotated and dumped or moved to where its needs to be placed.

The chain on the EZ SPOT UR chain base needs to be checked every day to prevent it from breaking and to make sure it is well lubricated and tight. The chain has a bolt that is connected to the bracket on the motor. The bolt can be turned to tighten or loosen the chain. The chain tensioner is shown in Figure 9.



Figure 9: Chain tensioner on the chain base



### Maintenance

To keep the barrel handler operating at maximum efficiency, minimal maintenance is required. This includes greasing, inspecting, and cleaning the barrel handler.

#### **Grease Points**

The rotation shaft is the main part that needs to be greased. The location of the grease zerk is shown in Figure 10. The shaft should be greased weekly to keep the bearings running smoothly. Use a high quality Lithium based grease.

The chain on the chain base also needs lubrication. Lubricate the chain weekly with WD-40 or 3-in-1 oil.



Figure 10: Locations of the grease points



#### Inspections

To avoid accidents, inspect the barrel handler according to Table 1 below.

#### **Table 1: Inspection Schedule**

Inspection Type	Description	Frequency	Inspection Date	Inspected by
Welds	Check all welds for cracks to insure that the integrity of the attachment isn't compromised.	Upon Arrival then Weekly		
Shaft	Check for wear in the shaft and check for cracks. Also check the stop for breakage	Upon Arrival then Weekly		
Grease Zerks	Add grease to grease zerks to prevent moving parts from locking up.	Upon Arrival then Weekly		
Hydraulic Lines	Check for oil leaking from the lines. A loose connection could result in the loss of hydraulic pressure	Upon Arrival then Weekly		
Rubber Bumpers	Check for wear in the bumpers in the jaws. Replace if worn	Upon Arrival then Weekly		
Decals	Check for worn or missing decals. Replace the decals as needed. Consult the <u>Decal</u> <u>Locations</u> section in this manual	Upon Arrival then Weekly		
Nuts and Bolts	Check the tightness of each nut and bolt and make sure it has the proper torque	Upon Arrival then Weekly		
Chain	Check the tightness of the chain and lubricate	After first two hours of operation check chain. Then check daily. Lube and tighten chain weekly.		



#### **Cleaning**

Keeping your barrel handler clean is an important step to maintain the appearance of the attachment. A mild detergent and a pressure washer can be used to wash off dirt and mud. Spray paint can be used to touch up the spots where paint is missing to prevent rust. This will also keep your attachment looking like new.

## Storage

Properly cleaning and storing your new machine is critical to maintaining its appearance and ensuring years of service.

- 1. Thoroughly clean all debris off the attachment to prevent damage
- 2. Check the attachment for worn and damaged parts periodically. Perform repairs and make replacements immediately to prevent health hazards. Failure to replace worn parts could result in serious injury or death.
- 3. Make sure to store the attachment in a clean, dry place.
- 4. Keep the hydraulic hose ends from sitting in water, dirt and other contaminants. Connect the hydraulic lines together to prevent dirt and other contamination from entering the hydraulic system.
- 5. Use spray touch-up enamel where necessary to prevent rust and to maintain the appearance of the attachment.



# **Barrel Handler Hydraulic Schematic**





# **Chain Base Hydraulic Schematic**





# **Barrel Handler Decal Locations**





# **Chain Base Decal Locations**





# **Exploded View**



To order parts, call EZ SPOT UR at Toll Free: 877-433-5733 Phone: 701-282-2772



ITEM NO.	PART NUMBER	DESCRIPTION	QTY
1	CDB-01-0003	CHAIN BASE WELDMENT	1
2	LZ-00-0005	JAM NUT	2
3	EZ-00-0070	LOCK WASHER	1
4	BEARING	TAPERED ROLLER BEARING WITH 3.5" BORE AND 6" OD	
5	RACE	RACE FOR BEARING	2
6	CDC-00-0004	UPPER COVER	1
7	CDC-00-0001	RIGHT COVER	1
8	CDC-00-0002	LEFT COVER	1
9	CHAIN	DOUBLE STRANDED #40 ROLLER CHAIN	1
10	CDS-00-0004	3.5" SPACER RING	1
11	CDS-00-0003	CHAIN BASE SPROCKET FOR #40 ROLLER CHAIN	1
12	MOTOR	CHAIN BASE HYDRAULIC MOTOR	1
13	CDB-00-0011	MOTOR SPROCKET	1
14	CDB-01-0004	MOTOR TENSION BRACKET	1
15	CDB-00-0001	MOTOR BRACKET	1
16	LZ-00-0004	SHAFT	1
17	CDC-00-0003	LOWER COVER	1
18	CLAMP CYLINDER	2.5" BORE, 1" ROD, 3" STROKE	2
19	CDB-00-0008	CHAIN BASE ROTATION STOP	1
20	HDW-00-0034	3/4" PIN	1
21	RECEIVER TUBE BOLT	3/4" BOLT	1
22	REAR CYLINDER BOLT	3/4"-10 BOLT; LENGTH 5.5"	2 2 2
23	FRONT CYLINDER BOLT	3/4"-10 BOLT; LENGTH 5"	2
24	PIVOT BOLT	1"-8 BOLT; LENGTH 6.5"	2
25	3/4" NUT	3/4"-10 FLANGED NUT	4
26	1" NUT	1"-8 FLANGED NUT	2
27	CS-01-0001	BARREL HANDLER HEAD	1
28	CS-01-0002	55 GALLON BARREL HANDLER JAW	2
29	CDB-00-0012	SPRING FOR SPRING HOSE KIT	1
30	EZ-00-0056	SPUD FOR SPRING MOUNT	1





## Parts Breakdown

The parts breakdown shows the part number and description of each part.

#### **Barrel Handler**



To order parts, call EZ SPOT UR at Toll Free: 877-433-5733 Phone: 701-282-2772



**Chain Base** 



To order parts, call EZ SPOT UR at Toll Free: 877-433-5733 Phone: 701-282-2772



QTY.



# **EC Declaration of Conformity**

We,

EZ SPOT UR Inc. 803 25<sup>th</sup> St. N Fargo ND 58102 Phone: 877 433 5733 Fax: 701 277 4625

declare under our sole responsibility that

Product

EZ-0002 Barrel Handler

Serial Number

to which this declaration relates is in conformity with all the essential health and safety requirements that applies following the provisions of the Machinery Directive (2006/42/EC).

The technical construction file is maintained at:

EZ SPOT UR 803 25<sup>th</sup> St. N Fargo ND 58102

The authorized representative located within the Community is:

NAME **ADDRESS** PHONE FAX

Date of issue: \_\_\_\_\_

Place of issue:

Signature of authorized person

Typed name of authorized person



## **Limited Warranty**

Customer Name (Printed):		
Customer Name (Signature):		
Selling Dealer:		
Order Number:	Date of Purchase:	
Serial Number:	Product:	

#### WARRANTY

EZ SPOT UR Inc. warrants your product to be free from defects in material and workmanship for a period of 1 year from the original date of purchase. Hydraulic components will be warranted for a period of 1 year: excluding hydraulic hoses, cylinders, and couplers. If you discover a defect in a product covered by this warranty, we will repair at our option using new components, or if repair is not possible, replace the item. It is the owner's responsibility to keep nuts and bolts tight and to maintain the machine as indicated in the operator's manual. Neglect or abuse of this machine may VOID warranty.

#### **EXCLUSIONS**

This warranty covers defects in manufacturing discovered while using the product as recommended by the manufacturer. The warranty does not cover loss or theft, nor does coverage extend to damage caused by misuse, abuse, unauthorized modification, improper storage conditions, or natural disasters. The warranty does not cover parts that are subject to normal wear and tear replacement requirements, such as auger teeth, tree saw teeth, and hydraulic hoses.

#### LIMITS OF LIABILITY

Should the product(s) fail, your sole recourse shall be repair or replacement, as described in the preceding paragraphs. We will not be held liable to you or any other party for any damages that result from the failure of this product. Damages include but are not limited to the following: lost profits, lost savings, damage to other equipment, and incidental or consequential damages arising from the use, or inability to use this product. In no event will EZ SPOT UR Inc. be liable for more than the amount of your purchase price, not to exceed the current list price of the product, and excluding tax, shipping and handling charges.

EZ SPOT UR Inc. disclaims any other warranties, expressed or implied. By installing or using the product, the user accepts all terms described herein.

#### HOW TO OBTAIN SERVICE UNDER THIS WARRANTY

Contact us using one of the following methods:

Toll Free: 877-433-5733

Phone: 701-282-2732

Email: sales@ezspotur.com

#### **Requirements**

Return shipping costs to be paid for by the owner or customer purchasing this equipment. The cost of shipping to the manufacturer or authorized repair center or payment of any customs clearance fees or duties is the responsibility of the user/owner/customer.