

# WALLENSTEIN



## SpecBook 2016 Sales Specifications Reference

# **INTRODUCTION**

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## **The Purpose of This Book**

This book is intended as a reference aid for people selling or purchasing Wallenstein equipment. It is not intended to replace the catalogue, but it is intended to explain features and specifications which are outside the scope of the catalogue. It incorporates answers to the frequently asked questions we receive.

This book is not intended as a service or parts manual. However some of the information will be helpful in setting up and servicing your Wallenstein equipment.

## **How To Use This Book**

This book is divided into sections. There is 1 section for each of our product lines. The section page incorporates a list of each of the model designations and what they mean. Each section begins with helpful notes about features, specifications equipment matching and intended uses. This page also includes a section index.

Following the notes are charts showing the details on these features, specifications and equipment matching. At the bottom of most of the charts there is a line referring the reader to the appropriate helpful notes from the beginning of the section.

## **Disclaimer**

The information contained in this manual is current at the time of publishing.

EMB reserves the right to change features and specifications at any time without notice.



# INDEX

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<b>SECTION 1: ENGINES</b>	<b>Page 05</b>
Notes	05
Specifications	06
<b>SECTION 2: BACKHOES</b>	<b>Page 8</b>
Notes	09
Equipment Mounting and Matching Options	12
Mounting Examples	12
Hydraulic Options for Equipment Matching	14
Hydraulic Specifications	14
Cylinders	15
<b>SECTION 3: WOOD CHIPPERS and CHIPPER-SHREDDERS</b>	<b>Page 16</b>
Notes	17
3-Point Hitch and Skidsteer Equipment Matching	20
3-Point Hitch Pump Kit Specifications	20
3-Point Hitch and Skidsteer Model Specifications	21
Engine Driven Model Specifications	21
BXTR6438 Hydraulic Specifications	23
BXTR6438F/BXTR6438P Fluid Coupler Specifications	23
Trailing	23
<b>SECTION 4: GENERATORS</b>	<b>Page 25</b>
Notes	26
Features: Emergency Power Series	28
Features: Contractor Ready Series	29
Features: Specialty Series	30
NEMA Receptacle Codes Used	30
Performance: Emergency Power Series	31
Performance: Contractor Ready Series	31
Performance: Specialty Series	32
Battery Sizes for Electric Start Models	32
<b>SECTION 5: LOG GRAPPLES AND TRAILERS</b>	<b>Page 33</b>
Notes	34
Grapple Features	37
LX5000 Grapple Series Equipment Matching	37
Timber Talon Grapple Series Equipment Matching	37
Auxiliary Hydraulic Features	37
LT Log Trailer Series Equipment Matching	38
PowerPack Specifications	38
Cylinder Sizes	39
Capacities	39

# INDEX

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<b>SECTION 5: WOOD SPLITTERS</b>	<b>Page 40</b>
Notes	41
WX300 Series Specifications	44
WX400 Series Specifications	44
Trailer Models Mechanical Specifications	44
Trailer Models Hydraulic Specifications	46
Pump Kit Specifications	47
Valve Types	48
Trailer	48
 <b>SECTION 6: WOOD PROCESSORS</b>	 <b>Page 50</b>
Notes:	51
Wood Processor Features	54
Winch Specifications	54
WP200 Series Equipment Matching	54
Pump Kit Specifications	54
WP600/WP800 Performance	55
WP600/WP800 Trailer	55
WP600/WP800 Fluids and Filters	55
 <b>SECTION 7: MANURE SPREADERS</b>	 <b>Page 56</b>
Notes:	57
Ground Drive Specifications	59
PTO Drive Specifications	60
 <b>SECTION 8: LOGGING WINCHES AND SKIDDING PLATES</b>	 <b>Page 61</b>
Notes	62
Winch Equipment Matching	65
Winch Features	65
Winch Performance	66
Skidding Plate Features	66

# Section 1

## ENGINES

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### Section Index

<b>Notes</b>	<b>05</b>
<b>Specifications</b>	<b>06</b>

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### Notes

- 1) EMB does not warranty the engines. The engine manufacturer does.
- 2) EMB does not supply engine parts.
- 3) Please read the included Engine Owner's Manual prior to operating engine-powered equipment. It is supplied by the engine manufacturer. Follow its direction for operation and maintenance.
- 4) Engines must be properly tuned and run at full throttle in (3600RPM) in order for the product to operate at maximum efficiency. The operator may try running the engine at partial throttle thinking it will conserve fuel, reducing noise, or extending engine life. However, this is counterproductive. It actually decrease efficiency and reduces component life.
- 5) Engines are preset by the manufacture and are not adjustable except for RPM. The exception to this is the generator engines, where throttles are locked in place.
- 6) Vertical shaft engines on Economy model splitters do not have adjustable throttles.
- 7) Horsepower ratings may change due to engine manufacturers rethinking their testing and advertising.
- 8) The most common cause of engine running problems, such as hunting and surging, is fuel. Either it is contaminated with water, dried flakes of stale fuel or other foreign material, or contains excess Ethanol. Fuel grade is not as important as age, where it is bought and how clean the container and the engine are when refilled. Maximum allowable Ethanol content according to most engine manufacturers is 10%. Either of these will cause lean running symptoms such as hunting and surging. The lean carburetion necessitated by modern emissions laws, along with lower quality fuel and Ethanol additives as well as the search for more power, means that the engines are more unforgiving than ever, particularly in cold temperatures when the air is denser and needs even more fuel to run properly. It is recommended to fill up using as clean container and/or a reputable high-volume filling station.
- 9) Currently, lean-running due to environmental regulations requires that engines be allowed to warm up for a while before they will accept throttle and load.
- 10) Proper storage procedures are essential
- 11) Engine manufacturers are silent on the use of synthetic oil.

## ENGINE SPECIFICATIONS

PRODUCT	MAKE	MODEL	DISPLACEMENT CC/ HP	SPECIFICATION #	STARTING R = RECOIL E = ELECTRIC	OIL MONITOR L = LEVEL P = PRESSURE
GENERATOR	HONDA	GC160	160 / 4.6	UAVXC	R	LEVEL SHUTOFF
		GX160	163 / 4.8	U1VX2	R	L SHUTOFF
		GX270	270 / 9.0	RT2VMT2	R	L SHUTOFF
		GX340	389 / 11.0	UVX16	R	L SHUTOFF
		GX390	389 / 13.0	RT2VC2	R & E	L SHUTOFF
		GX630	688 / 20.8	RVXE1	E	L SHUTOFF
		GX690	688 / 22.1	RHVE2	E	L SHUTOFF
	KOHLER	KD350	349 / 6.7	PAKD3504001A	R & E	P SHUTOFF
	KUBOTA	OC95E3	416 / 9.4	EC95E3G1GX	E	P WARNING
CHIPPER & CHIPPER - SHREDDER	HONDA	GX270	270 / 9.0	UT2QH26	R	N
		GX390	389 / 13.0	KQAE6	R & E	N
		GX690	688 / 22.1	RHTXA	E	N
	KOHLER	CH980S	999 / 38.0	CH980-0002	E	P WARNING
	SUBARU	SP/EX210	211 / 7.0	DT1031	R	N
		EX270	265 / 9.0	DE5012	R	L SHUTOFF
		EX400	404 / 14.0	DE5011	R & E	L SHUTOFF
		EH722EFI	720 / 28.0	DSF010	E	P WARNING
SPLITTER	HONDA	GC160	160 / 5.0	LAQHC	R	N
		GX160	163 / 5.5	T1QHC	R	N
		GX200	200 / 6.5	UT2QH26	R	N
		GX270	270 / 9.0	UT2QH26	R	N
	SUBARU	EA190V	189 / 5.8	50060	R	N
		SP/EX210	211 / 7.0	DT1031	R	N
WOOD PROCESSOR	SUBARU	EX270	265 / 9.0	DE5012	R	L SHUTOFF
		EX400	404 / 14	DS6060	R / E	L SHUTOFF

**ENGINE SPECIFICATIONS CONTINUED**

<b>PRODUCT</b>	<b>MAKE</b>	<b>MODEL</b>	<b>DISPLACEMENT CC/ HP</b>	<b>SPECIFICATION #</b>	<b>STARTING R = RECOIL E = ELECTRIC</b>	<b>OIL MONITOR L = LEVEL P = PRESSURE</b>
<b>POWERPACK</b>	SUBARU	SP/EX210	211 / 7.0	DT1031	R	N
		EX270	265 / 9.0	DE5012	R	L SHUTOFF
<b>SEE NOTES</b>	1, 2, 3	6	4, 5, 7	-	-	-

## Section 2

# BACKHOES

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### GE Subcompact Economy Series

- **GE605**

### GX Standard Series

- **GX620**
- **GX720**
- **GX920**

### GX-XT Telescoping Dipperstick Series

- **GX920XT**
- 

## SECTION INDEX

<b>Notes</b>	<b>09</b>
<b>Equipment Mounting and Matching Options</b>	<b>12</b>
<b>Mounting Examples</b>	<b>12</b>
<b>Hydraulic Options for Equipment Matching</b>	<b>14</b>
<b>Hydraulic Specifications</b>	<b>14</b>
<b>Cylinders</b>	<b>15</b>



## Notes

### **(A) EQUIPMENT MATCHING**

- 1) Horsepower recommendations refer to engine HP, not PTO
- 2) Horsepower recommendation **MUST** be adhered to.
- 3) Tractor requirements for backhoe mounting are:
  - a) It must have a front loader mounted.
  - b) It must have either auxiliary hydraulics with 5-7gpm flow to run the backhoe or a rear 540rpm PTO output shaft to run the hydraulic pump kit.
  - c) It must weigh at least 1600 lbs with the loader attached in order to offset the weight of the backhoe without tipping.
- 6) As a general rule, tractors 45HP and under require a subframe.

### **(B) HYDRAULICS**

- 1) Backhoes require constant hydraulic flow from the auxiliaries of the power unit, via 1 set of remotes (1 pressure line and 1 return line), or a PTO pump kit.
- 2) For GX models without a built-in flow divider, 7GPM is the **MAXIMUM**, it is not just a guideline recommendation. This provides maximum efficiency, and is safely within the maximum flow rating of the main valve. We are going to hold to that specification for sales recommendations and warranty. We do have the BFC501 Flow Divider Kit available for tractors that produce higher flow rates. The other possible solution is a PTO Pump Kit. Installing the backhoe on a tractor with higher than recommended hydraulic fluid flow through the remotes can cause internal damage to the valve. It can also cause damage to the backhoe hoses, cylinders and weldments. Some customers are trying to get around this by merely running the tractor at idle. However, this has created operating problems with the backhoes. The hydraulic systems in many tractors do not produce sufficient flow or pressure at idle to properly operate the backhoe. This causes operational problems. The BFC501 would allow the customer to operate the tractor at its most efficient engine RPM. Even at idle, some tractors can create higher than recommended pressure and flow than the backhoe requires. In order for the customer to have the greatest satisfaction with our backhoe, it is critical that we keep to the recommended 5-7 GPM range.
- 3) Backhoes come set up for operation on tractors with Open Center hydraulics. The appropriate Closed Center kit **MUST** be installed for use on tractors with Closed Center hydraulics. Or a Pump Kit can be used.
- 4) Controls come set up as ISO (Deere/Backhoe) style. We **DO NOT** recommend modification.
- 5) Boom lift circuit has a ‘float’ function as a safety feature.
- 6) All swing cylinders incorporate a swing cushion to prevent the backhoe from slamming against the frame at full swing. This is accomplished by means of extended skirts on the pistons which close off the return ports at the travel limits.
- 7) All backhoes include a swing speed adjuster. This is the silver knob by the operator’s left foot. This allows the operator to slow down the swing speed when operating near objects or loading trucks.

- 8) GX620, GX720, GX920 AND GX920XT models feature anti-shock cushioning in the swing circuit. This prevents shock loads through the frames when the operator stops the swing at high speed with a full bucket. It is accomplished
- 9) For XT models, the telescoping dipperstick cylinder is not intended to have power for digging. It is intended to extend the reach when required. The operator can dig with the dipperstick extended.
- 10) In some instances, the Z56918 Power Beyond kit may be required for use with some tractor power beyond kits with 3 lines supplied by tractor manufacturers. Or a Pump Kit can be used.
- 11) Backhoes come standard with necessary hoses and Pioneer Ball-Style couplers. The hoses are colour-coded. Red for Pressure and Black for Tank. Skidsteer mount kits include ½" FlatFace couplers.
- 12) Some tractor models may have safety switches which will prevent the use of auxiliary hydraulics without an operator in the seat.
- 13) A check valve is mounted at the main valve to prevent damage caused by hooking the hoses up backwards. Hoses have colour-coded caps.
- 14) Some skidsteer models may have safety switches which will prevent the use of auxiliary hydraulics without an operator in the seat.
- 15) Cylinders are rebuildable. The rod end (gland) is threaded into the barrel using a RH thread.
- 16) The 2' flat bottom digging depth is measured to standard with the bucket cutting edge pointed down, not including the teeth.

#### **(C) MOUNTING KITS**

- 1) Backhoes do not include mounting kits. The frames have universal mount plates to which one of our mounting kits bolt. Mounting kits **MUST** be ordered separately.
- 2) Bellymount subframes are NOT quick-connect, they require removal of lower 3-pt hitch arms.
- 3) 4-point subframes usually require wheel spacing on tractors equipped with Industrial or Turf Tires, either with spacers or by reversing the rim offset.
- 4) Top link **MUST** be used on all Bellymount subframes.
- 5) Skidsteer mounting requires quick-attach mounting plate + machine-specific TieBack kit. Includes Flat Face couplers.
- 6) In case of a difference in the horsepower rating for a backhoe between the brochure and the subframe list for a specific tractor, use the subframe rating because it includes an assessment of the actual tractor.
- 7) If a loader is not specified in the subframe list, it can be assumed to be an OEM loader, but we cannot state which one with certainty. Modification of the loader mount plates may be required.
- 8) Please contact us if a subframe or tieback kit is not listed for your tractor or skidsteer. We can locate a current model unit to measure up in order to design the proper subframe for it.
- 9) Not all subframes are compatible with midmount mowers. Please see website.
- 10) Not all mounting kit types are available for all applications.

- 11) 3-Point Hitch controls **MUST NOT** be operated with any backhoe attached.
- 12) Skidsteer loader/bucket controls **MUST NOT** be operated with a tieback kit attached.
- 13) GX600/700/900 model backhoes will mount to current subframes and 3-point hitch kits.
- 14) Proper set height is 13” from the ground to the bottom of the backhoe frame.

#### **(D) ACCESSORIES**

- 1) The BT5250 weld-on thumb is **NOT** recommended for use on backhoes or excavators with more than 4000 lbs of bucket force, otherwise the thumb will be damaged. Bucket length will also be a problem on larger backhoes and excavators since the thumb length is 19”. It should be mounted so that the jaw and the bucket just meet when both are perpendicular to the dipperstick.
- 2) The BT53300 Hydraulic thumb **MUST** be ordered installed on a new backhoe. It is virtually impossible to install it afterwards.
- 3) The BT5300 Hydraulic Thumb is not available on the GX920XT. There is no provision for mounting it with the telescopic dipper, and no provision for operating it in the hydraulics.
- 4) The GE605 does not come with a seat as standard, it is optional. This is due to the fact that many of the subcompact tractors have a seat which turns around.

#### **(E) ORDERING**

- 1) To properly order a backhoe package, each of these must be ordered:
  - a) Pick your backhoe model based on tractor or skidsteer
  - b) Pick your colour
  - c) Pick your mounting kit
  - d) Pick your bucket
  - e) Pick your Accessories

## Equipment Matching and Mounting Options

MODEL	REQUIRED FLOW USgpm	TRACTOR SIZE	SKIDSTEER SIZE	MOUNTING OPTIONS			
				3PH CAT 1	3PH CAT 2	SUBFRAME	SKIDSTEER
<b>GE605</b>	3.5-6	18-28	MINI	N	N	Y	MINI
<b>GX620</b>	5-7	18-30	MINI	PT300	N	Y	MINI
<b>GX720 LAST S/N 3720772</b>	5-7	30-60	30-60	PT300	PT322	Y	SQ500 +TB KIT
<b>GX720 1ST S/N 3720773</b>	MINIMUM 5	30-60	30-60	PT300	PT322	Y	SQ500 +TB KIT
<b>GX920 LAST S/N 3920684</b>	5-7	30-100	30-100	PT300	PT322	Y	SQ500 +TB KIT
<b>GX920 FIRST S/N 3920685</b>	MINIMUM 5	30-100	30-100	PT300	PT322	Y	SQ500 +TB KIT
<b>GX920XTLAST S/N 3920XT220</b>	5-7	30-100	30-100	PT300	PT322	Y	SQ500 +TB KIT
<b>GX920XT 1ST S/N 3920XT221</b>	MINIMUM 5	30-100	30-100	PT300	PT322	Y	SQ500 +TB KIT
<b>QC620</b>	MAX. 3000PSI	N	NO LIMIT	N	N	N	Y
<b>SEE NOTES</b>	B1, B2	A1, A3, A2, A6, A12, C6, D4	A1, A2, B12	A3, A6, C1, C10, C11, C13	A3, A6, C1, C10, C11, C13	A3, C1, C2, C3, C4, C6, C7, C8, C9, C10	B13, C5, C8, C10, C12, C14

## Mounting Examples

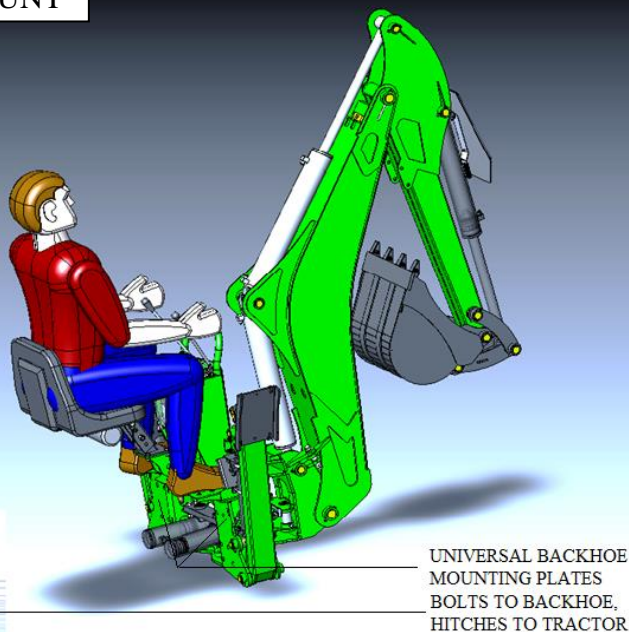
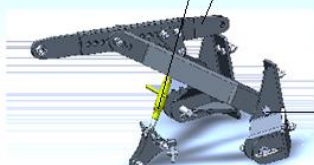
The following page shows illustrations of the different mounting kit types

Note that there are 2 different styles of subframes: Bellymount and 4-Point.

Please see notes above.

### 3-POINT HITCH MOUNT

RIGID ADJUSTABLE  
TOPLINK BARS  
DRAWBAR TIEOFF

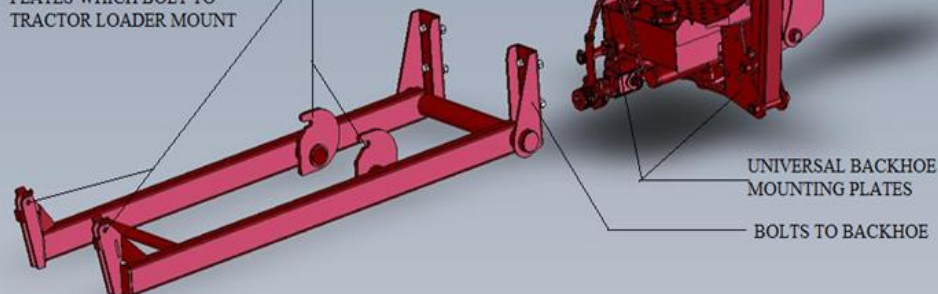


UNIVERSAL BACKHOE  
MOUNTING PLATES  
BOLTS TO BACKHOE,  
HITCHES TO TRACTOR

### BELLYMOUNT SUBFRAME

HOOK TO LOWER 3-POINT  
HITCH ARM PINS. MUST  
REMOVE ARMS

PINS TO MOUNTING  
PLATES WHICH BOLT TO  
TRACTOR LOADER MOUNT



UNIVERSAL BACKHOE  
MOUNTING PLATES

BOLTS TO BACKHOE

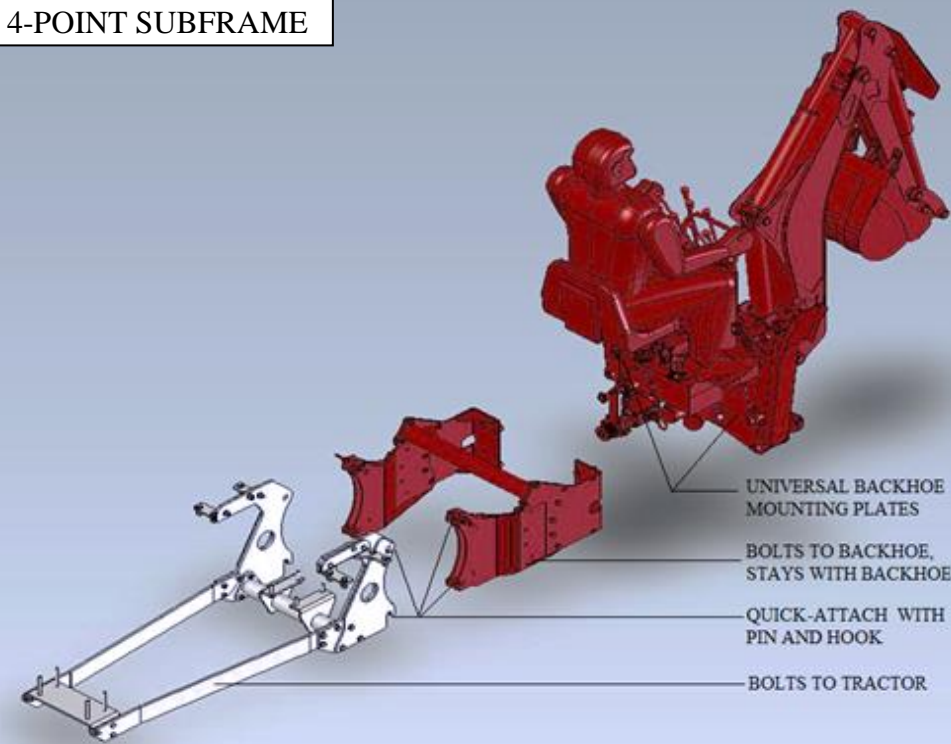
### 4-POINT SUBFRAME

UNIVERSAL BACKHOE  
MOUNTING PLATES

BOLTS TO BACKHOE,  
STAYS WITH BACKHOE

QUICK-ATTACH WITH  
PIN AND HOOK

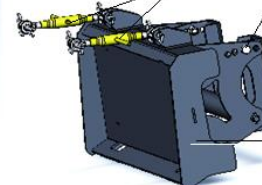
BOLTS TO TRACTOR



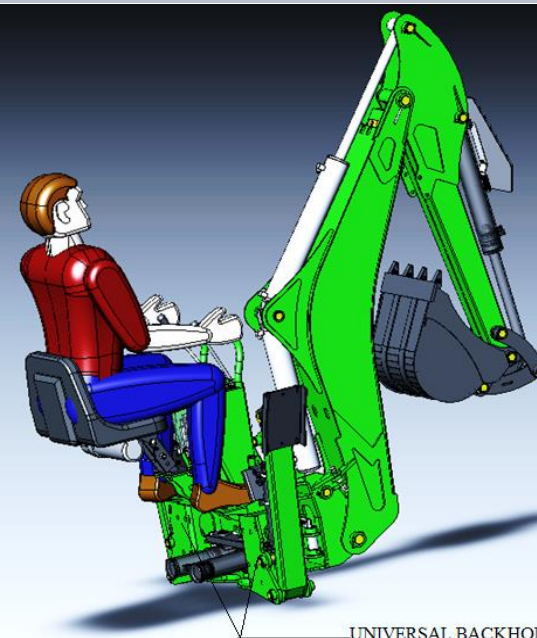
### SKIDSTEER MOUNT

TILT ADJUSTMENT

MACHINE-SPECIFIC TIEBACK  
KIT TRANSFERS LOADS TO  
SKIDSTEER FRAME



UNIVERSAL BACKHOE  
MOUNTING PLATES  
BOLTS TO BACKHOE  
UNIVERSAL SKIDSTEER  
QUICK-ATTACH PLATE



## Hydraulic Options for Equipment Matching

MODEL/ SERIAL NUMBER	PUMP KIT	FLOW DIVIDER KIT	CLOSED-CENTER KIT			POWER BEYOND KIT
			OLDER, NO FOOT VALVE	OLDER, WITH FOOT VALVE	CURRENT	
<b>GE605 ALL</b>	PTO605	N	N	N	Z56916	Z56918
<b>GX620 ALL</b>	PTO62	BFC501	Z56916	N	Z56916	Z56918
<b>GX720 Last S/N 3720772</b>	PTO72	BFC501	Z56916	BT7270	N	Z56918
<b>GX720 1st S/N 3720773</b>	PTO72	Built In	N	N	BT5360	Z56918
<b>GX920 Last S/N 3920684</b>	PTO72	BFC501	Z56916	BT7270	N	Z56918
<b>GX920 1st S/N 3920685</b>	PTO72	Built In	N	N	BT5360	Z56918
<b>GX920XT Last S/N 3920XT220</b>	PTO72	BFC501	N	BT7270	N	Z56918
<b>GX920XT 1st S/N 3920XT221</b>	PTO72	Built In	N	N	BT5360	Z56918
<b>QC620 ALL</b>	N	N	Z56916	N	N	N
<b>SEE NOTES</b>	A3, B1, B2, B3	B2	B3	B3	B3	B10
<b>NOTE</b>	Foot valves are used on GX720 and GX920 with BT5300 hydraulic thumb, and GX920XT					

## Hydraulic Specifications

MODEL	MAIN VALVE RELIEF (psi)	PUMP KIT				
		PRESSURE (psi)	FLOW (USgpm)	TANK (l)	FLUID TYPE	FILTER TYPE
<b>GE605</b>	1800	2175	4.8	10.0	HD HYDRAULIC	IN-TANK
<b>GX620</b>	1850	2300	5.5	9.5	HD HYDRAULIC	IN-TANK
<b>GX720</b>	2250	2300	5.5	12.5	HD HYDRAULIC	IN-TANK
<b>GX920</b>	2250	2300	5.5	12.5	HD HYDRAULIC	IN-TANK
<b>GX920XT</b>	2250	2300	5.5	12.5	HD HYDRAULIC	IN-TANK
<b>QC620</b>	N	N	N	N	N	N
<b>SEE NOTES</b>	B5, B7, B12, B13	-	-	-	-	-



## CYLINDERS

MODEL	CYLINDER X ROD SIZE (inch)					
	CUSHION SWING (QTY)	BOOM	DIPPER	BUCKET	STABILIZERS	OTHER
<b>GE605</b>	(1X) 2.5 X 1.25	2.5 X 1.25	2.25 X 1.25	2.0 X 1.25	2.0 X 1.25	N
<b>GX620</b>	(2X) 2.0 X 1.25	2.0 X 1.25	2.25 X 1.25	2.25 X 1.25	2.0 X 1.25	N
<b>GX720</b>	(2X) 2.5 X 1.25	3.0 X 1.5	3.0 X 1.5	2.5 X 1.5	2.5 X 1.5	<b>BT5300</b> 2.25 X 1.25
<b>GX920</b>	(2X) 2.5 X 1.5	3.0 X 1.5	3.0 X 1.5	2.5 X 1.5	3.0 X 1.75	
<b>GX920XT</b>	(2X) 2.5 X 1.5	3.0 X 1.5	3.0 X 1.5	2.5 X 1.5	3.0 X 1.75	<b>XT</b> 1.75 X 1.0
<b>QC620</b>	N	N	N	2.5 X 1.5	N	N
<b>SEE NOTES</b>	B6, B7, B, B14	B13	B13	B13	B13	B9, B13, D2, D3

## Section 3

# Chippers and Chipper-Shredders

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### **CHIPPERS**

#### **BX 3-Point Hitch Mount PTO Drive Series**

- **BX-S Self Feed Models**
- **BX-R Hydraulic Roller Feed Models**
- **BX-RI Hydraulic Roller Feed Models featuring Intellifeed Electronic Feed Control**
- **BX-RP Hydraulic Roller Feed Models featuring Hydraulic Winch and Top Roller Lift**
- **BX-RPI Hydraulic Roller Feed Models featuring Intellifeed, Winch and Roller Lift**

#### **BXH Skidsteer Mount Series Hydraulic Drive Self Feed Series**

#### **BXC Engine Drive Cart Mounted Series**

#### **BXT Engine Drive Trailer Mounted Series**

#### **BXTR Engine Drive Trailer Mounted Hydraulic Roller Feed Series**

### **CHIPPER-SHREDDERS**

#### **BXM 3-Point Hitch Mount PTO Drive Series**

#### **BXMC Engine Drive Cart Mounted Series**

#### **BXMT Engine Drive Trailer Mounted Series**

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## SECTION INDEX

<b>NOTES</b>	<b>17</b>
<b>3-POINT HITCH AND SKIDSTEER EQUIPMENT MATCHING</b>	<b>20</b>
<b>3-POINT HITCH PUMP KIT SPECIFICATIONS</b>	<b>20</b>
<b>3-POINT HITCH AND SKIDSTEER MODEL SPECIFICATIONS</b>	<b>21</b>
<b>ENGINE DRIVEN MODEL SPECIFICATIONS</b>	<b>21</b>
<b>BXTR6438 HYDRAULIC SPECIFICATIONS</b>	<b>23</b>
<b>BXTR6438F/BXTR6438P FLUID COUPLER SPECIFICATIONS</b>	<b>23</b>
<b>TRAILERING</b>	<b>23</b>

## Notes

### **(A) GENERAL**

- 1) Self-feed chippers are NOT convertible to roller feed. The housings and rotors are different. The mounting flanges will not line up, the self-feed models do not have the mounts for lift-assist struts. The mounts and lower housing may not be strong enough for the added weight and stress, the rotors are different and the angles of the hoppers are different.
- 2) PTO shafts supplied may not be long enough to work with some Quick-Hitch models. EMB does not supply extensions or longer shafts. The customer will need to source their own.
- 3) 3-Point Hitch models ship with 3 spare shearbolts.
- 4) Chippers are disc-type. Chipping knives are mounted to the face of the rotor, and use a ledger knife or anvil mounted in the housing.
- 5) Chipper-Shredders use a 2-section welded rotor in a 2-chambered housing. The chipping section is identical to the chippers, and feeds from the rear or the side. The shredding section consists of 3 rows of flail knives, and feeds from the top. It is critical to keep to the size limit on the shredder section. If required, larger prices can be chipped in the chipper section, and then the chips can be fed into the shredder.
- 6) Limited Class 1 hitches have limited range of movement, both in arm spread and lift/lower height. For this reason the BX52 models feature adjustable skidframe height. The BX32S and BXM32S may require boards under the ski base. The lower pins may have to be reversed so that they face in.
- 7) Operation of 3-Point Hitch chippers at 1000rpm requires changing the tractor-end yoke to one with the appropriate number of splines. Intellifeed models will need to be reprogrammed for start rpm.
- 8) It is recommended that the operator run a chipper or chipper-shredder a few moments before shutting it down in order to clear out any wood or woodchips that could jam it upon startup.
- 9) Rotor knives are reversible and can be sharpened. They can be sharpened until the trailing edge of the bevel (short side) is flush with the rotor surface.
- 10) Ledger knives have 4 useable edges. They can be flipped/reversed 3 times.

### **(B) POWER UNITS**

- 1) The Horsepower recommendations MUST be adhered to.
- 2) The Horsepower recommendations refer to engine HP, not PTO.
- 3) The PTO driveline MUST be measured and cut as per the Owner's Manual. Failure to do so will result in damage to both the tractor and the implement.
- 4) PTO-driven models MUST be run at a minimum of 540 PTO RPM in order to work properly. The tractor engine RPM required to attain this varies with the tractor model.
- 5) Engine-driven models must be properly tuned and run at full RPM (3600).

## **(C) DRIVE ENGAGEMENT**

- 1) Centrifugal clutches use friction pads which are pushed outwards by centrifugal force as RPM increases until they engage the housing, turning the pulley. Springs pull them back to resting position when RPM falls. They must be run at full engine RPM to avoid damage.
- 2) The fluid coupler is recommended for heavy industrial/commercial and rental use. It replaces the standard centrifugal clutch, and is similar to an automotive torque converter in how it works. It consists of an inner section, which turns with the engine and works like a hydraulic pump, and an outer which has the belt pulley and functions like a hydraulic motor. The coupler is filled with an AW type hydraulic fluid. As the engine speed increases, the inner starts throwing oil at the outer. This causes the outer, and therefore the rotor, to start turning as well. Full engagement is reached at full engine RPM. The coupler is protected by a replaceable thermal plug, which melts out to release the fluid when overheated, which disengages the drive.
- 3) The C200 kit includes fluid coupler, taper bushing adapter for engine shaft, different muffler, and different belt guard, as well as necessary hardware.
- 4) Brake Clutches are engaged by balls running in decreasing-depth ramps. When disengaged, springs hold brake friction pads engaged, so that the rotor cannot turn, and springs hold the clutch friction pads disengaged so that the motor can turn freely. When engaged, the brake is disengaged and the clutch is engaged. This arrangement causes the rotor to be stopped quickly once the he clutch is disengaged, for safety reasons.
- 5) Belt Tension engagement is done by tensioning the belt. The belt is longer so that when disengaged the belt slips on the pulley. The engagement lever pushes a pulley against the belt to supply the tension required to drive the chipper A spring holds it engaged.

## **(D) HYDRAULIC ROLLER FEED & INTELLIFEED MODELS**

- 1) Intellifeed models will work in reverse as long as there is hydraulic flow and enough voltage to shift the solenoid (see D3). However, they WILL NOT work in forward until the rotor reaches the programmed start RPM.
- 2) Intellifeed models require 13V @ 1.5A in order to operate. This means that the engine must be running and the alternator charging, and they be wired into a circuit that will provide this. The wiring harness does not have a plug. It is up to the customer to supply one which matches the tractor. Red is positive, black is negative.
- 3) Intellifeed models are fully programmable to adjust feed rate and aggressiveness.
- 4) BX-R model chippers require constant hydraulic flow from the auxiliaries of the power unit, via 1set of remotes (1 pressure line and 1 return line), or a PTO pump kit.
- 5) All relief pressures are set at 3000psi.
- 6) BX-R and -RP models have an adjustable flow divider which sends excess hydraulic flow back to the tractor. It is adjustable to allow the operator to increase the feed speed for smaller brush or decrease it for larger logs.
- 7) BX-R models come standard with hoses and Pioneer Ball-Style couplers. The hoses are colour-coded. Red for Pressure and Black for Tank.
- 8) BXH models come standard with necessary hoses and ½” FlatFace couplers. They do not require a separate case drain; there is a check-valve protected circuit which allows the motors to turn while the rotor winds down.

- 9) Some tractor or skidsteer models may have safety switches which will prevent the use of auxiliary hydraulics without an operator in the seat.

## **(E) BXMC MODELS**

- 1) BXMC32B: “B” means Blower. The chips are blown out through the discharge chute at the rear of the unit. They can be collected using the optional bag, which fastens over the end of the discharge chute. The BXMC32B uses more shredder knives than the BXMC32S for this reason.
- 2) BXMC32S: “S” means Screen. The chips are held in by a screen in the bottom of the housing. There are cut repeatedly by the shredder knives until they are fine enough to fall through the screen to the ground below, where they are kept together by the nose housing. There are 2 optional screens available in addition to the standard one to change the chip sizes. The BXMC32S uses fewer shredder knives than the BXMC32B for this reason.

## **(F) TRAILER MODELS**

- 1) BXT Chipper models feature a 2-position adjustable length tongue.

## **(G) ACCESSORIES**

- 1) Biomass Kit and/or Chute Extension: it is recommended that the chipper be run at 1000RPM when using these accessories.
- 2) Pump kits are driven by the rotor via pulleys and belt(s). 1 pulley slides over the rotor input shaft, between the PTO shaft and the rotor bearing and is driven by a key. The fluid tank bolts into the 3-point hitch A-frame. BX-R rotor shafts are longer than BX-S shafts to accommodate the pulley. Pump Kits are designed to operate at 540RPM.

### 3-POINT HITCH and SKIDSTEER EQUIPMENT MATCHING

MODEL	HP	HITCH CATEGORY	QUICK- HITCH?	PTO HEIGHT (in)	HYDRAULIC (USgpm)	ELECTRIC (V/A)
<b>3-POINT HITCH PTO DRIVE CHIPPERS</b>						
<b>BX32S</b>	12-35	1	Y	10.72	N	N
<b>BX52S</b>	18-50	1	Y	13.44-19.00	N	N
<b>BX52R</b>	18-50	1	Y	21.5-27.0	3-5	N
<b>BX52RI</b>	18-50	1	Y	21.5-27.0	3-5	13V-1.5A
<b>BX72S</b>	35-100	1	Y	19.00	N	N
<b>BX72R</b>	40-100	1	Y	26.00	4-6	N
<b>BX72RI</b>	40-100	1	Y	26.00	4-6	13V/1.5A
<b>BX102S</b>	65-150	2	Y	23.00	N	N
<b>BX102R</b>	65-150	2	N	34.00	5-7	N
<b>BX102RI</b>	65-150	2	N	34.00	8-10	13V/1.5A
<b>BX102RP</b>	65-150	2	N	34.00	8-10	13V/1.5A
<b>BX102RPI</b>	65-150	2	N	34.00	8-10	13V/1.5A
<b>3-POINT HITCH PTO DRIVE CHIPPER-SHREDDERS</b>						
<b>BXM32</b>	12-35	1	Y	10.7	N	N
<b>BXM42</b>	30-90	1	Y	27	N	N
<b>SKIDSTEER MOUNT HYDRAULIC DRIVE CHIPPERS</b>						
<b>BXH42</b>	N	N	N	N	20-30	N
<b>SEE NOTES</b>	A3, B1, B2, F2	A6	A2	A6	A1, D3, D4, D5 D6, D7, D8, D9	D1, D2, D3

### 3-POINT HITCH PUMP KIT SPECIFICATIONS

PUMP KIT	PRESSURE psi	FLOW usgpm	TANK CAPACITY l	FLUID	FILTER
<b>C3540</b>	3600	4.0	9.5	Dexron3 or 4 ATF	In tank
<b>C4550</b>	3600	4.5	9.5	Dexron3 or 4 ATF	In tank
<b>SEE NOTES</b>	G2	-	-	-	-



### 3-POINT HITCH and SKIDSTEER MODEL SPECIFICATIONS

MODEL	ROTOR DRIVE	INPUT RPM	ROTOR KNIFE	SHREDDER KNIFE #	ROTOR SIZE/ WEIGHT In/lb	DISCHARGE HEIGHT in
<b>3-POINT PTO DRIVE CHIPPERS</b>						
<b>BX32S</b>	PTO-BELT	540	2X 2.5" OFFSET	N	17.5 X 0.5 / 45	56.25
<b>BX52S</b>	PTO-DIRECT	540 OR 1000	4X 6.0" FULL	N	24.75 X 0.625 / 125	55.75-61.25
<b>BX52R/I</b>	PTO-DIRECT	540 OR 1000	4X 6.0" FULL	N	24.75 X 0.625 / 125	63.25 – 68.25
<b>BX72S</b>	PTO-DIRECT	540 OR 1000	4X 8.5" FULL	N	28 X 0.75 / 175	77.675
<b>BX72R/I</b>	PTO-DIRECT	540 OR 1000	4X 4.5" OFFSET	N	28 X 0.75 / 185	84.675
<b>BX102S</b>	PTO-DIRECT	540 OR 1000	4X 6.75" OFFSET	N	36 X 1.25 / 400	84.0
<b>BX102R/I/P/PI</b>	PTO-DIRECT	540 OR 1000	4X 6.75" OFFSET	N	36 X 1.25 / 425	95.0
<b>3-POINT PTO DRIVE CHIPPER-SHREDDERS</b>						
<b>BXM32</b>	PTO-BELT	540	2X 2.5" OFFSET	27	17.5 X 0.5 / 70	56.5
<b>BXM42</b>	PTO-BELT	540	2X 6" FULL	30	25 X 0.5 / 170	58.0
<b>SKIDSTEER MOUNT HYDRAULIC DRIVE CHIPPERS</b>						
<b>BXH42</b>	HYDRAULIC	20-30 GPM	2X 6' FULL	N	25 X 0.5 /74	56.0
<b>SEE NOTES</b>	A1, A2, A3, B3 B8, B9	A7, B4	A4,B10 ,	A5	-	-

### ENGINE DRIVEN MODEL SPECIFICATIONS

MODEL	ENGINE E= ELECTRIC START	FUEL CAPACITY l	ROTOR DRIVE	ROTOR KNIFE	SHREDDER KNIFE	ROTOR SIZE/ WEIGHT In/lb	DISCHARGE HEIGHT in
<b>BXC CART-TYPE SELF FEED CHIPPERS</b>							
<b>BXC32</b>	SUBARU SP210	3.6	BRAKECLUTCH + BELT	2X 2.5" SPLIT OFFSET	N	17 X 0.3125 / 28	28.25
<b>BXC32H</b>	HONDA GX200	3.1	BRAKECLUTCH + BELT	2X 2.5" SPLIT OFFSET	N	17 X 0.3125 / 28	28.25
<b>BXT TRAILER TYPE SELF FEED CHIPPERS</b>							
<b>BXT4213</b>	HONDA GX390 E	6.1	CENTRIFUGAL + BELT	2X 6.5" FULL	N	25 X 0.5 / 7 4	67.25
<b>BXT4214SU</b>	SUBARU EX40 E	7	CENTRIFUGAL + BELT	2X 6.5" FULL	N	25 X 0.5 / 74	67.25

**ENGINE DRIVEN MODEL SPECIFICATIONS CONTINUED**

<b>MODEL</b>	<b>ENGINE E=ELECTRIC START</b>	<b>FUEL CAPACITY l</b>	<b>ROTOR DRIVE</b>	<b>ROTOR KNIFE</b>	<b>SHREDDER KNIFE</b>	<b>ROTOR SIZE/ WEIGHT lb</b>	<b>DISCHARGE HEIGHT in</b>
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**BXT TRAILER TYPE SELF FEED CHIPPERS CONTINUED**

<b>BXT4224</b>	HONDA GX690 E	25	CENTRIFUGAL + BELT	2X 6.5" FULL	N	25 X 0.5 / 74	67.25
<b>BXT4228SU</b>	SUBARU EH72FI E	25	CENTRIFUGAL + BELT	2X 6.5 FULL	N	25 X 0.5 / 74	67.25
<b>BXT6224</b>	HONDA GX690 E	25	CENTRIFUGAL + BELT	4X 4.5" FULL	N	30 X 0.75 / 197	85.75
<b>BXT6228SU</b>	SUBARU EH72FI E	25	CENTRIFUGAL + BELT	4X 4.5" FULL	N	30 X 0.75 / 197	85.75
<b>BXT6238</b>	KOHLER CH980 E	25	CENTRIFUGAL + BELT	4X 4.5" FULL	N	30 X 0.75 / 197	87.75

**BXMC CART-TYPE SELF FEED CHIPPER-SHREDDERS**

<b>BXMC32S</b>	SUBARU SP/EX210	3.6	BELT + BRAKE CLUTCH	2X 2.5" SPLIT OFFSET	8	14 X 0.3125 / 28	0
<b>BXMC32SH</b>	HONDA GX200	3.1	BELT + BRAKE CLUTCH.	2X 2.5" SPLIT OFFSET	8	14 X 0.3125 / 28	0
<b>BXMC32B</b>	SUBARU SP/EX210	3.6	BELT + BRAKE CLUTCH.	2X 2.5" SPLIT OFFSET	12	16 X 0.3125 / 40	12.125
<b>BXMC32BH</b>	HONDA GX200	3.1	BELT + BRAKE CLUTCH	2X 2.5" SPLIT OFFSET	12	16 X 0.3125 / 40	12.125

**BXMT TRAILER-MOUNTED SELF FEED CHIPPER-SHREDDERS**

<b>BXMT3209</b>	HONDA GX270	5.3	CENTRIFUGAL + BELT	2X 2.5" SPLIT OFFSET	27	17.5 X 0.5/ 70	55.5
<b>BXMT3209SU</b>	SUBARU EX270	6.1	CENTRIFUGAL + BELT	2X 2.5" SPLIT OFFSET	27	17.5 X 0.5 / 70	55.5
<b>BXMT3213</b>	HONDA GX390 E	6.1	CENTRIFUGAL + BELT	2X 2.5" OFFSET	27	17.5 X 0.5 / 70	56.25
<b>BXMT3214SU</b>	SUBARU EX400 E	7	CENTRIFUGAL + BELT	2X 2.5" SPLIT OFFSET	27	17.5 X 0.5 / 70	56.25
<b>BXMT4224</b>	HONDA GX690 E	25	CENTRIFUGAL + BELT	2X 6.5" FULL	30	25 X 0.5 / 170	73.75
<b>BXMT4228SU</b>	SUBARU EH722FI E	25	CENTRIFUGAL + BELT	2X 6.5" FULL	30	25 X 0.5 / 170	73.75

**ENGINE DRIVEN MODEL SPECIFICATIONS CONTINUED**

MODEL	ENGINE E=ELECTRIC START	FUEL CAPACITY l	DRIVE	ROTOR KNIFE	SHREDDER KNIFE	ROTOR SIZE/ WEIGHT lb/in	DISCHARGE HEIGHT in
<b>BXMT TRAILER-MOUNTED SELF FEED CHIPPER-SHREDDERS CONTINUED</b>							
<b>BXMT4238</b>	KOHLER CH980 E	25	CENTRIFUGAL + BELT	2X 6.5” FULL	30	25 X 0.5 / 170	73.75
<b>BXTR TRAILER TYPE HYDRAULIC ROLLER FEED CHIPPERS</b>							
<b>BXTR6438F/P</b>	KOHLER CH980 E	34	BELT + FLUID COUPLER	4X 4.5” FULL	N	30 X 0.75 / 197	91.0
<b>SEE NOTES</b>	B5		C1, C2, C3, C4, C5	B10	-	-	-

**BXTR6438 HYDRAULIC SPECIFICATIONS**

Hydraulic Pump		PRESSURE RELIEF psi	DEXRON 3 OR 4 ATF	Hydraulic Filters	
Pressure psi	Flow USgpm			Suction	Return
3600	4.8	3000	30L	IN-TANK	IN-TANK
<b>SEE NOTES</b>	-	-	-	-	-

**BXTR6438F/ BXTR6438P FLUID COUPLER SPECIFICATIONS**

MAKE	MODEL	FLUID TYPE	FILL LEVEL	CAPACITY l	FUSIBLE PLUG °C
<b>TRANSFLUID</b>	K9	AW32	X	1.95	198
<b>ROTOFLUID</b>	30 K	AW22	45° (218mm)	2.39	180
<b>SEE NOTES</b>	C1, C2, C3	-	-	-	-

**TRAILERING**

MODEL	WHEEL SIZE	HITCH / ADJUSTABLE TONGUE	FENDERS	LIGHTS	SUSPENSION	BRAKES	WHEEL TRACK in	GROUND CLEARANCE in
<b>BXT SERIES</b>								
<b>BXT4213</b>	4.80-8 LRB	2” BALL / Y	Y	Y	TORFLEX	N	52.125	6.375
<b>BXT4214</b>	4.80-8 LRB	2” BALL / Y	Y	Y	TORFLEX	N	52.125	6.375

## TRAILERING CONTINUED

MODEL	WHEEL SIZE	HITCH / ADJUSTABLE TONGUE	FENDERS	LIGHTS	SUSPENSION	BRAKES	WHEEL TRACK in	GROUND CLEARANCE in
<b>BXT SERIES CONTINUED</b>								
<b>BXT4224</b>	4.80-8 LRB	2" BALL / Y	Y	Y	TORFLEX	N	52.125	6.375
<b>BXT4228SU</b>	4.80-8 LRB	2" BALL / Y	Y	Y	TORFLEX	N	52.125	6.375
<b>BXT6224</b>	20.5X8-10 LRB	2" BALL / Y	Y	Y	TORFLEX	N	65.875	7.125
<b>BXT6228SU</b>	20.5X8-10 LRB	2" BALL / Y	Y	Y	TORFLEX	N	65.875	7.125
<b>BXT6238</b>	20.5X8-10 LRB	2" BALL / Y	Y	Y	TORFLEX	N	65.875	7.125
<b>BXTR SERIES</b>								
<b>BXTR6438F</b>	ST205/75R14	2" BALL / Y	Y	Y	TORFLEX	N	54.25	11.50
<b>BXTR6438P</b>	ST205/75R14	2" BALL / Y	Y	Y	TORFLEX	ELECTRIC	54.25	11.50
<b>BXMT SERIES</b>								
<b>BXMT3209</b>	4.10-6 NHS	CLEVIS / N	N	N	N	N	30.75	5.75
<b>BXMT3209SU</b>	4.10-6 NHS	CLEVIS / N	N	N	N	N	30.75	5.75
<b>BXMT3213</b>	4.80-8 LRB	2" BALL / N	Y	Y	TORFLEX	N	32.75	5.25
<b>BXMT3214SU</b>	4.80-8 LRB	2" BALL / N	Y	Y	TORFLEX	N	32.75	5.25
<b>BXMT4224</b>	16.5X6.5-8LRC	2" BALL / N	Y	Y	TORFLEX	N	55.5	7.0
<b>BXMT4228SU</b>	16.5X6.5-8LRC	2" BALL / N	Y	Y	TORFLEX	N	55.5	7.0
<b>BXMT4238</b>	16.5X6.5-8LRC	2" BALL / N	Y	Y	TORFLEX	N	55.5	7.0
<b>SEE NOTES</b>	-	F1	-	-	-	-	-	-

## Section 4

# GENERATORS

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### WH Emergency Power Series

- WHC Compact Models
- WHS Standard Models
- 5000W to 7000W WS Standard Models feature Auto-Idle and Full Power Switch
- WHS Heavy Duty Models featuring Auto-Idle
- WHS-R Models featuring AVR

### WC Contractor Ready Series

- WCC Compact Models featuring GFCI Outlets
- WCS Standard Models featuring Full Panel GFCI
- 5000W to 7000W WCS Standard Models feature Auto-Idle and Full Power Switch
- WCS Heavy Duty Models featuring Auto-Idle and Full Panel GFCI
- WCS-R Models featuring AVR

### Specialty Series

- DK Diesel Engine Models featuring Full Power Switch and Load Monitor
- WDC Welder-Generator Models featuring DC welding output for SMAW.

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## SECTION INDEX

<b>NOTES</b>	<b>26</b>
<b>FEATURES: EMERGENCY POWER SERIES</b>	<b>28</b>
<b>FEATURES: CONTRACTOR READY SERIES</b>	<b>29</b>
<b>FEATURES: SPECIALTY SERIES</b>	<b>30</b>
<b>NEMA RECEPTACLE CODES USED</b>	<b>30</b>
<b>PERFORMANCE: EMERGENCY POWER SERIES</b>	<b>31</b>
<b>PERFORMANCE: CONTRACTOR READY SERIES</b>	<b>31</b>
<b>PERFORMANCE: SPECIALTY SERIES</b>	<b>32</b>
<b>BATTERY SIZES FOR ELECTRIC START MODELS</b>	<b>32</b>

## Notes

### **(A) ALTERNATORS**

- 1) Generators are 1 Phase, 60Hz, Sine Wave, Copper Wound, and Brushless.
- 2) Voltage regulation is via capacitor
- 3) Alternator output is within the allowable variation of +/-5% frequency, +/-10% voltage.
- 4) All neutrals and grounds are bonded to frame.
- 5) AVR (Automatic Voltage Regulation), if equipped, is accomplished by wiring in added capacitors.
- 6) Voltage output will vary with engine RPM and load. No-load voltage is set high to allow for the reduced engine RPM and voltage under load.
- 7) AVR does not affect THD.
- 8) Auto-Idle senses current passing through the neutral wire.

### **(B) ENGINES**

- 1) Engine must be properly tuned and run at full throttle (3600 RPM). Throttles are locked in this position.
- 2) Generators are shipped without engine oil. Please see engine owner's manual for oil type and quantity.
- 3) Electric start models are shipped without battery. Batteries must be ordered separately, or sourced locally. Please see chart on page 31.
- 4) All generator engines feature an oil monitoring system. Gasoline engines monitor level. Diesel engines monitor pressure. All except the DK7300E will shut the engine down. The DK7300E operates a warning lamp only.
- 5) Diesel generators MUST be run at a minimum of half-load constantly. Otherwise, problems develop with poor running and excessive smoking (Wet Stacking).
- 6) The DK7300E Kubota engine features a glowplug to aid starting. The DK5000E does not.
- 7) Electric start engines on 5000W and 7000W models have recoil backup. Electric start engines on 7300W, 12KW and 14KW models do not have recoil backup.
- 8) Engines are shipped without oil. The oil is drained after testing.

### **(C) INSTALLATION & USE**

- 1) Please determine wattage requirements of everything the generator will be required to run together at any time before purchasing.
- 2) For generators without AVR output fluctuations in Frequency and Voltage may make them unsuitable for electronics.
- 3) Generators with AVR are suitable for electronics, provided there are no heavy motor starting loads combined with the electronics.



- 4) Do not operate generators or welder-generators in a confined space, such as a truck toolbox cabinet, since this will prevent the unit from cooling properly
- 5) Diesel generators are not suitable for use as home backup, due to low/variable load demands (see B2).
- 6) Consult a licensed electrician for proper hookup when using as a home backup.
- 7) Bonded neutrals and grounds should only be used with transfer switches which switch neutral (3-pole) when used as home backup.
- 8) The Full Power Switch on Diesel generators reconfigures the alternator output wiring to a parallel circuit. This allows full wattage to be available at the 120V twist lock outlet. However, 240V is not available when Full Power is selected.

## **(C) WDC MODELS**

- 1) Welder-generators use brushes, and do not use capacitors.
- 2) Welders have a duty cycle of 50% at maximum amperage for welding. This means that the welder cannot be operated for more than 5 minutes out of 10 without overheating, which will trip the thermal breaker. The thermal breaker will reset itself once the unit has cooled down. The thermal breaker affects the welder use only, the outlets can still be used.
- 3) Welding output is DC, SMAW (Stick)
- 4) The electrical outlets cannot be used while welding.

## Features

### EMERGENCY POWER SERIES

Model Wattage	OUTLETS (V)			BREAKERS (A)		Capacitor (mf) (ADDED)	FULL PANEL GFCI	AVR	FULL POWER SWITCH	AUTO IDLE
	120	240	120/240	MAIN	POPOUT					
WHC Compact Models										
2500 2400/2000	4X 5-20	N	N	N/A	1X 12	18	N	N	N	N
3000 2500/2100	4X 5-20	N	N	N/A	2X15	18	N	N	N	N
5000 5000/4250	2X 5-20	N	1X L14-30	N/A	2X 15	20	N	N	N	N
WHS Standard Models										
3000 2500/2100	2X 5-20 1X L5-30	N	N	15	N/A	18	N	N	N	N
3000R 2500/2100	2X 5-20 1X L5-30	N	N	15	N/A	18 12/10	N	Y	N	N
5000 5000/4250	4X 5-20 1X L5-30	N	1X L14-30	17.5	2X 15	20	N	N	Y	Y
5000R 4600/4250	4X 5-20 1X L5-30	N	1X L14-30	17.5	2X 15	20 14/14	N	Y	Y	Y
7000 6500/6250	4X 5-20 1X L5-30	N	1X L14-30	26	2X 15	31.5	N	N	Y	Y
7000R 6700/6250	4X 5-20 1X L5-30	N	1X L14-30	26	2X 15	31.5 16/20	N	Y	Y	Y
WHS Heavy Duty Models										
12000 12K/10K	4 X 5-20 1X L5-30	1X 6-50	1X L14-30 1X 14-50	42 30 SUB	2X 15	2X 31.5	N	N	N	Y
12000R 12.7K/10K	4 X 5-20 1X L5-30	1X 6-50	1X L14-30 1X 14-50	42 30 SUB	2X 15	2X 31.5 (40/40)	N	Y	N	Y
14000 12.8K/12K	4 X 5-20 1X L5-30	1X 6-50	1X L14-30 1X 14-50	50 30 SUB	2X 15	2X 40	N	N	N	Y
14000R 13.9K/12K	4 X 5-20 1X L5-30	1X 6-50	1X L14-30 1X 14-50	50 30 SUB	2X 15	2X40 (40- 20/40-14)	N	Y	N	Y
SEE NOTES	-	-	-	-	-	-	-	A5, A2, A7, C3	C8	A8

**CONTRACTOR-READY SERIES**

Model Wattage	OUTLETS (V)			BREAKERS (A)		Capacitor (mf) (ADDED)	FULL PANEL GFCI	AVR	FULL POWER SWITCH	AUTO IDLE
	120	240	120/240	MAIN	POPOUT					
WCC Compact Models										
2500 2400/2000	4X 5-20 GFCI	N	N	N	1X 12	18	N	N	N	N
3000 2500/2100	4X 5-20 GFCI	N	N	N	2X 15	18	N	N	N	N
5000 5000/4250	4X 5-20 GFCI	N	N	N	2X 15	20	N	N	N	N
WCS Standard Models										
3000 2500/2100	2X 5-20 1XL5-30	N	N	15	N	18	Y	N	N	N
3000R 2500/2100	2X 5-20 1XL5-30	N	N	15	N	18	Y	Y	N	N
5000 5000/4250	4X 5-20 1XL5-30	N	1X L14-30	17.5	2X 15A	20	Y	N	Y	Y
5000R 4600/4250	4X 5-20 1XL5-30	N	1X L14-30	17.5	2X 15A	20 (14/14)	Y	Y	Y	Y
7000 6500/6250	4X 5-20 1XL5-30	N	1X L14-30	26	2X 15A	31.5	Y	N	Y	Y
7000R 6700/6250	4X 5-20 1XL5-30	N	1X L14-30	26	2X 15A	31.5 (16/20)	Y	Y	Y	Y
WCS Heavy Duty Models										
12000 12K/10K	4 X 5-20 1X L5-30	1X 6-50	1X L14-30 1X 14-50	42 30 SUB	2X 15	2X 31.5	Y	N	N	Y
12000R 12.7K/10K	4 X 5-20 1X L5-30	1X 6-50	1X L14-30 1X 14-50	42 30 SUB	2X 15	2X 31.5	Y	Y	N	Y
14000 12.8K/12K	4 X 5-20 1X L5-30	1X 6-50	1X L14-30 1X 14-50	50A 30A SUB	2X 15	2X 40	Y	N	N	Y
14000R 13.9K/12K	4 X 5-20 1X L5-30	1X 6-50	1X L14-30 1X 14-50	50A 30A SUB	2X 15	2X 40 (40- 14/40-20)	Y	Y	N	Y
SEE NOTES	-	-	-	-	-	A5	-	A5, A2, A7, C3	C8	A8

**SPECIALTY SERIES**

Model Wattage	OUTLETS (V)			BREAKERS (A)		Capacitor (mf) (ADDED)	FULL PANEL GFCI	AVR	FULL POWER SWITCH	AUTO IDLE
	120	240	120/240	MAIN	POPOUT					
DK Diesel Engine Series (Includes Load Monitor)										
DK5000E 5000/3750	4X 5-20 GFCI 1X L5-30	N	1X L14-30	20	2X 15 1X 20	20	N	N	Y	N
DK7300E 7300/6000	4X 5-20 GFCI 1X L5-30	N	1X L14-30	30	2X 15 1X 20	31.5	N	N	Y	N
WDC Welder-Generator Series (DC SMAW WELDING: MODEL # DENOTES MAXIMUM WELDING AMPERAGE)										
160 3500/3000	2X 5-20 GFCI	N	1X L14-30	N	2X 15	N	N	N	N	N
190E 3500/3000	2X 5-20 GFCI	N	1X L14-30	N	2X 15	N	N	N	N	N
190EA 3500/3000	2X 5-20 GFCI	N	1X L14-30	N	2X 15	N	N	N	N	Y
NOTES	C2, C3, C4	-	-	-	-	A5	-	A5, A2, A7, C3	C8	A8

**NEMA RECEPTACLE CODES USED**

120V	240V	120/240V
5-20 = 20A T-slot	6-50 = 50A Welder	L14-30 = 30A Twist-Lock
5-20 GFCI = 20A T-slot GFCI	-	14-50 = 50A Stove/Dryer
L5-30 = 30A Twist-Lock	-	-

## PERFORMANCE

### EMERGENCY POWER SERIES

MODEL	ENGINE E=Electric Start	FUEL CAPACITY (l)	RUN TIME (HOURS)		NOISE LEVEL dB (A) @ 7M	THD %
			HALF LOAD	FULL LOAD		
WHC Compact Models						
2500	Honda GC160	1.8	2.75	2.25	68	<7.5
3000	Honda GX160	3.1	3.0	2.5	68	<7.5
5000	Honda GX270	6.0	4	3	70.5	<6
WHS Standard Models						
3000/3000R	Honda GX160	18.0	16.6	12.5	68	<7.5
5000/5000R	Honda GX270	26.0	12.3	9.1	70.5	<6
7000/7000R	Honda GX390 E	26.0	12.4	7.2	70.5	<6
WHS Heavy Duty Models						
12000/12000R	Honda GX630 E	46.0	10.2	6.8	77	<4
14000/14000R	Honda GX690 E	46.0	8.6	5.7	77	<4
SEE NOTES	A6, B1	-	-	-	-	-

### CONTRACTOR-READY SERIES

MODEL	ENGINE E=Electric Start	FUEL CAPACITY (l)	RUN TIME (HOURS)		NOISE LEVEL dB (A) @ 7M	THD %
			HALF LOAD	FULL LOAD		
WCC Compact Models						
2500	Honda GC160	1.8	2.75	2.25	68	<7.5
3000	Honda GX160	3.1	3.0	2.5	68	<7.5
5000	Honda GX270	6.0	4	3	70.5	<6
WCS Standard Models						
3000/3000R	Honda GX160	18	16.6	12.5	68	<7.5
5000/5000R	Honda GX270	26	12.3	9.1	70.5	<6
7000/7000R	Honda GX390 E	26	12.4	7.2	70.5	<6

**CONTRACTOR-READY SERIES CONTINUED**

MODEL	ENGINE E=Electric Start	FUEL CAPACITY(l)	RUN TIME (HOURS)		NOISE LEVEL dB (A) @ 7M	THD %
			HALF LOAD	FULL LOAD		
WCS Heavy Duty Models						
12000/12000R	Honda GX630 E	46	10.2	6.8	77	<4
14000/14000R	Honda GX690 E	46	8.6	5.7	77	<4
SEE NOTES	A2, A7, B1, B2, B8	-	-	-	-	A7

**SPECIALTY SERIES**

MODEL	ENGINE E=Electric Start	FUEL CAPACITY (l)	RUN TIME (HOURS)		NOISE LEVEL dB (A) @ 7M	THD %
			HALF LOAD	FULL LOAD		
DK Diesel Engine Series						
5000E	Kohler KD350 E	20	22	14	77	<6
7300E	Kubota OC95 E	20	16	9	77	<6
WDC Welder-Generator Series						
160	Honda GX340	6.1	4	3	70.5	N/A
190E	Honda GX390 E	6.1	3.5	2.75	70.5	N/A
190EA	Honda GX390 E	15.5	15.5	7	70..5	N/A
SEE NOTES	A2, A7, B1, B2, B2, B3 B4,B5, B6, B8	-	-	-	-	A7

**BATTERY SIZES FOR ELECTRIC-START MODELS**

GENERATOR/ENGINE TYPE	BATTERY GROUP SIZE	VOLTAGE	CCA / AH
<b>7000W GAS</b>	U1 (LAWN & GARDEN)	12	250 / 18-30
<b>12000W GAS</b>	U1 (LAWN & GARDEN)	12	250 / 36
<b>14000W GAS</b>	U1 (LAWN & GARDEN)	12	250 / 36
<b>5000W DIESEL</b>	U1 (LAWN & GARDEN)	12	250 / 44
<b>7300W DIESEL</b>	U1 (LAWN & GARDEN)	12	250 / 36-48
<b>WELDER-GENERATOR</b>	U1 (LAWN & GARDEN)	12	250 / 18-30
<b>SEE NOTES</b>	B3	-	-



## Section 5

# GRAPPLES AND TRAILERS

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### **LX5000 Tractor & Skidsteer Grapple Series**

- **LX5100 3-Point Hitch Model with Spring-Return Head**
- **LX5200 Skidsteer Model with Lockable Spring-Return Head**
- **LX5300 Skidsteer Model with 360° Hydraulic Rotator Head**

### **LX95 Timber Talon Mountable Logboom Series**

- **LX95 basic model**
- **LX95P featuring auxiliary hydraulic valve**
- **LX95W featuring 2-speed hydraulic winch**
- **LX95PW featuring auxiliary hydraulic valve and 2-speed hydraulic winch**

### **LT30 Log Trailer Series**

- **LT30 basic off-road featuring off-road tires, clevis hitch, manual sliding axle**
- **LT30A ATV Package for off-road adds hydraulic sliding axle, surge brakes**
- **LT30H basic highway featuring highway tires, ball hitch, surge brakes, lights, manual sliding axle**
- **LT30HA ATV Package for highway adds hydraulic sliding axle to LT60H**

### **LT60 Log Trailer Series**

- **LT30 basic off-road featuring off-road tires, clevis hitch**
- **LT30H basic highway featuring highway tires, ball hitch, electric brakes, lights**

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## SECTION INDEX

<b>NOTES</b>	<b>34</b>
<b>GRAPPLE FEATURES</b>	<b>37</b>
<b>LX5000 GRAPPLE SERIES EQUIPMENT MATCHING</b>	<b>37</b>
<b>TIMBER TALON GRAPPLE SERIES EQUIPMENT MATCHING</b>	<b>37</b>
<b>AUXILIARY HYDRAULIC FEATURES</b>	<b>37</b>
<b>LT LOG TRAILER SERIES EQUIPMENT MATCHING</b>	<b>38</b>
<b>POWERPACK SPECIFICATIONS</b>	<b>38</b>
<b>CYLINDER SIZES</b>	<b>39</b>
<b>CAPACITIES</b>	<b>39</b>

## Notes

### **(A) LX5000 GRAPPLE SERIES**

- 1) Horsepower and Hydraulic requirements must be adhered to.
- 2) Horsepower requirements are based on engine HP, not PTO.
- 3) Tractor and skidsteer models require hydraulic flow from the auxiliaries of the power unit, via 1 set of remotes (1 pressure line and 1 return line).
- 4) LX5100 comes with hookup lines and Pioneer Ball-Style couplers.
- 5) LX5100 rotation cannot be locked in position. It is only for allowing logs to follow the tractor through turns. Grapple can be damaged by trying to reverse tractor with log hitched.
- 6) LX5200 and LX5300 models come with hookup lines and Flat Face couplers
- 7) LX5200 rotation can be locked in 3 different positions, center and 90° to each side. Care must be taken to not turn the grapple when locked, as this will damage grapple.
- 8) LX5300 requires 1 set of remotes and 12V/3.5A from skidsteer electrical system. It includes an electric solenoid operated valve, along with wiring harness with toggle switch and cigarette lighter style plug to hook into skidsteer. Default operation is grapple open/close. When the switch is activated, the electric solenoid shifts hydraulic flow through the valve to operate the rotator.
- 9) Hydraulic rotators cannot be locked. However they have a natural resistance to rotating unless hydraulic power is supplied.
- 10) Cylinders are rebuildable

### **(B) TIMBER TALON GRAPPLE SERIES**

- 1) Horsepower and Hydraulic requirements must be adhered to
- 2) Timber Talon models do not come with hookup hoses. They require either the Engine PowerPack OR L101 tractor hydraulic kit.
- 3) Logbooms have Open Center valves. The Z56316 Closed Center Plug MUST be installed in the main valve for use on tractors with Closed Center hydraulics.
- 4) Timber Talon stabilizers are part of the boom base, to allow mounting on L400 CAT 2 3-Point Hitch Kit for LT Log Trailers, or custom mounting.
- 5) “P” denotes additional single-spool valve to operate the hydraulic axles on LT30A & LT30HA  
“W” denotes 2-speed Hydraulic Winch operated by single-spool valve. The valve is included.  
“PW” denotes winch with dual-spool valve. The first spool operates the winch, the second spool operates the hydraulic axles on LT30A & LT30HA
- 6) The hoses to the rotator along the dipperstick feature quick-couplers to facilitate mounting the Backhoe Kit and the Auger. The hoses are colour coded to ensure correct hookup.
- 7) In case of hydraulic failure, the load is prevented from dropping by a Crossover Relief Valve.

- 8) Logbooms and trailers can be ordered and used separately
- 9) Cylinders are rebuildable
- 10) Winches, if equipped, have 3 positions: Neutral/Freewheel, High-Speed, Low-Speed. The winch does not power out. A friction block riding on the rim of the spool prevents the winch from unwinding too fast and tangling. Always have a load on the rope when winding it in. Always use a choker on the log due to the synthetic rope.

## **(C) LT LOG TRAILER SERIES**

- 1) Horsepower and Hydraulic requirements must be adhered to
- 2) LT30: Base model, ribbed Off-Road Tires, Clevis Hitch, Manually adjustable 4-position sliding axles, 29.5” range.  
LT30A: ATV model- Hydraulic Sliding Axle infinite positions within 29.5” range, Surge Brakes, ribbed Off-Road Tires, Clevis Hitch.  
LT30H: Highway model- Surge Brakes, Lights, Highway Tires, Ball Hitch, Manually adjustable 4-position sliding axles, 29.5” range. Axle must be pinned in one of those positions.  
LT30HA: Highway/ATV model- Hydraulic Sliding Axle infinite positions within 29.5” range, Surge Brakes, Lights, Highway Tires, Ball Hitch
- 3) LT60: Base model, ribbed Off-Road Tires, Clevis Hitch  
LT60H: Highway model- Electric Brakes, Lights, Highway Tires, Ball Hitch
- 4) Trailers have Walking Beam Axles
- 5) Trailers have mounts for Timber Talon Logbooms and Engine PowerPack
- 6) Logbooms and trailers can be ordered and used separately
- 7) Surge Brakes on LT30A, LT30H, and LT30HA operate using a hydraulic piston and cylinder in a telescoping section of the frame behind the hitch and hydraulic brakes. When the tow vehicle starts slowing down, the trailer tries to continue at the same speed, compressing the telescoping section behind the hitch, which causes the hydraulic cylinder to apply the brakes. The braking pressure is adjustable.
- 8) Electric Brakes on the LT60H feature a breakaway switch to apply the brakes in case the trailer becomes unhitched from the tow vehicle while moving.

## **(D) ACCESSORIES**

- 1) BA201 Backhoe Kit replaces grapple head and rotator with bucket, linkage and cylinder. Bucket curl is controlled by the grapple rotator lever. Cylinder is rebuildable
- 2) LA610 and LA910 Auger Kits replace grapple head with auger mounted directly to rotator shaft. Rotation is controlled by the rotator lever.
- 3) L650 Hydraulic Articulated Drawbar requires its own set of remotes on the tractor. It is controlled by the tractor’s control lever.
- 4) L101 Tractor Hydraulic Kit is required when using tractor remotes to power logboom. It is a flow divider kit which ensures that the required amount of hydraulic flow reaches the logboom and returns the excess to the

tractor tank. It is adjustable. Failure to use it can result in erratic operation of the Logboom and damage to it and other equipment, or injury.

- 5) L310/L620 Dump Box is mounted using the rearmost bunk post mounts. It dumps using a chain attached to the bucket to dump.
- 6) L310 and L620 Flat Bed is mounted using the front and rear bunk post mounts.
- 7) L301 and L501 PowerPacks use Dexron 3 or 4 ATF. The engine must be properly tuned and run at full throttle. Engines are recoil start only.
- 8) L400 3-Point Hitch Mount includes Pioneer Ball-style couplers and the L101 Tractor Kit. For Cat 2 tractors only.

## GRAPPLE FEATURES

MODEL	OPENING RANGE	GRAPPLE ROTATION °	LOCKABLE	ROTATOR	CENTERING	BOOM ROTATION °	STABILIZER SPREAD
<b>LX5100</b>	3-38 in	180	N	MANUAL	SPRING	N	N
<b>LX5200</b>	3-38 in	180	90 CENTER 90	MANUAL	SPRING	N	N
<b>LX5300</b>	3-38 in	360	RESISTANCE	HYDRAULIC	HYDRAULIC	N	N
<b>LX95</b>	3-30 in	360	RESISTANCE	HYDRAULIC	HYDRAULIC	270	7' 5"
<b>LX115</b>	3-38 in	360	RESISTANCE	HYDRAULIC	HYDRAULIC	270	8' 11'
<b>SEE NOTES</b>	-	-	A4, A6, A8	A7	-	-	-

## LX5000 GRAPPLE SERIES EQUIPMENT MATCHING

MODEL	HP	MOUNT	HYDRAULIC KIT	FLOW gpm	PRESSURE psi	ELECTRICAL V/A
<b>LX5100</b>	20-45	3-POINT CAT 1	N	2-10	3000	N
<b>LX5200</b>	20-35	SKIDSTEER	N	2-10	3000	N
<b>LX5300</b>	25-50	SKIDSTEER	BFC501 OR L101	5-10	3000	12V/3.5A
<b>SEE NOTES</b>	A1	-	A1, A3, A5, A7	A1	A1	A7

## TIMBER TALON GRAPPLE SERIES EQUIPMENT MATCHING

MODEL	TRACTOR MOUNT	TRACTOR HP	TRAILER MOUNT	TRAILER HP	HYDRAULIC KIT	FLOW gpm	PRESSURE psi
<b>LX95</b>	L400 CAT 2	30	LT30, LT30H	40	L301 OR L101	1-2	3000
<b>LX95P</b>	L400 CAT 2	30	LT30A, LT30HA	40	L301 OR L101	1-2	3000
<b>LX95W</b>	L400 CAT 2	30	LT30, LT30H	40	L301 OR L101	1-2	3000
<b>LX95PW</b>	L400 CAT 2	30	LT30A, LT30HA	40	L301 OR L101	1-2	3000
<b>LX115</b>	L400 CAT 2	45	LT60, LT60H	60	L501 OR L101	5-6	3000
<b>LX115W</b>	L400 CAT 2	45	LT60, LT60H	60	L501 OR L101	5-6	3000
<b>SEE NOTES</b>	B2, B4, B8, D8	B1	B2, B3, B4, B8, C2, C3	B1	B2, B3, D4, D7, D8	B1	B1

## AUXILIARY HYDRAULIC FEATURES

MODEL	AUXILIARY VALVE TYPE	FUNCTION	2-SPEED HYDRAULIC WINCH
LX5100	N	GRAPPLE	N
LX5200	N	GRAPPLE	N
LX5300	SOLENOID SINGLE SPOOL	ROTATOR, GRAPPLE	N
LX95	N	N	N
LX95P	SINGLE SPOOL	SLIDING AXLE LT30A, LT30HA	N
LX95W	SINGLE SPOOL	WINCH	Y
LX95PW	DUAL SPOOL	1- WINCH, 1- SLIDING AXLE	Y
LX115	N	N	N
LX115W	SINGLE SPOOL	WINCH	Y
SEE NOTES	A7, B5, C2	A7, B5, C2	B5

## LT LOG TRAILER SERIES EQUIPMENT MATCHING

MODEL	TIMBER TALON	MINIMUMUM ATV/UTV	HITCH	TIRES	SLIDING AXLE	BRAKES	LIGHTS
LT30	LX95, LX95W	N	CLEVIS	OFF-ROAD	MANUAL	N	N
LT30A	LX95P, LX95PW	600CC	CLEVIS	OFF-ROAD	HYDRAULIC	SURGE	N
LT30H	LX95, LX95W	N	2" BALL	ON-ROAD	MANUAL	SURGE	Y
LT30HA	LX95P, LX95PW	600CC	2" BALL	ON-ROAD	HYDRAULIC	SURGE	Y
LT60	LX115, LX115W	N	CLEVIS	OFF-ROAD	N	N	N
LT60H	LX115, LX115W	N	2-5/16" BALL	ON-ROAD	N	ELECTRIC	Y
SEE NOTES	B2, B4, B5, B8,	C1	-	-	C2, C3, C5, C6	C7, C8	-

## POWERPACK SPECIFICATIONS

Model	ENGINE MAKE/MODEL	PUMP		TANK CAPACITY l	RETURN FILTER
		PRESSURE psi	FLOW USgpm		
L301	SUBARU EX210	3750	2	17.5	SPIN-ON
L601	SUBARU EX270	3500	5	17.5	SPIN-ON
SEE NOTES	D7	-	-	D7	-

## CYLINDER SIZES

MODEL	GRAPPLE in	BOOM in	DIPPER	STABILIZER in	BA201 in	SLIDING AXLE in	L650 in
LX5100	2.5 X 1.5	N	N	N	N	N	N
LX5200	2.5 X 1.5	N	N	N	N	N	N
LX5300	2.5 X 1.5	N	N	N	N	N	N
LX95	2.0 X 1.25	2.5 X 1.5	2.5 X 1.25	2.0 X 1.25	2.25 X 1.25	N	N
LX115	2.5" X 1.5	3.0 X 1.5	2.5 X 1.25	2.25 X 1.25	2.25 X 1.25	N	N
LT30	N	N	N	N	N	N	N
LT30A	N	N	N	N	N	2.0 X 1.25	N
LT30H	N	N	N	N	N	N	N
LT30HA	N	N	N	N	N	2.0 X 1.25	N
LT60	N	N	N	N	N	N	2.0 X 1.25
LT60H	N	N	N	N	N	N	N
SEE NOTES	-	-	-	-	D1	C2	D3

## CAPACITIES

MODEL	LOAD lb @ REACH ft.-in.	LIFT HEIGHT ft.	2-SPEED WINCH (IF EQUIPPED) pull = lb, speed = ft./min					CAPACITY Cu. ft. / sq. ft.
			PULL -LOW	PULL- HIGH	SPEED- LOW	SPEED- HIGH	ROPE	
LX5100	1500	N	N	N	N	N	N	N
LX5200	1500	N	N	N	N	N	N	N
LX5300	1500	N	N	N	N	N	N	N
LX95	800 @ 9.5	15'	1700	2900	14.25	27.5	5/16" x 80'	N
LX115	1200 @ 11.5	18'	1800	3500	30.0	62.25	5/16" x 80'	N
LT30	5000	N	N	N	N	N	N	66.75 c.f.
LT60	11,500	N	N	N	N	N	N	124.25 c.f.
L310	N	N	N	N	N	N	N	25 c.f.
L330	N	N	N	N	N	N	N	45 s.f
L620	N	N	N	N	N	N	N	45 c.f.
L630	N	N	N	N	N	N	N	59.5 s.f.
SEE NOTES	-	-	-	-	-	-	-	-

## Section 5

# SPLITTERS

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### WE ECONOMY WOODSPLITTER SERIES

- WE200 20-TON TRAILER MOUNT ENGINE POWERED MODELS

### WX SERIES SPLITTERS

- WX300 20-31 TON 3-POINT HITCH MOUNT MODELS FOR TRACTORS WITH OPEN-CENTER HYDRAULICS. CATEGORY 1 HITCH AND QUICK-HITCH COMPATIBLE.
- WX300C 20-31 TON 3-POINT HITCH MOUNT MODELS FOR TRACTORS WITH CLOSED-CENTER HYDRAULICS. CATEGORY 1 HITCH AND QUICK-HITCH COMPATIBLE.
- WX400 20-31 TON SKIDSTEER MOUNT MODELS
- WX500 20 TON TRAILER MOUNT ENGINE-POWERED MODELS
- WX600 25 TON TRAILER MOUNT ENGINE-POWERED MODELS
- WX700R FIREBOLT 27 TON TRAILER MOUNT ENGINE-POWERED MODELS FEATURING REGENERATIVE VALVE
- WX900 SERIES 25-31 TON TRAILER MOUNT ENGINE-POWERED MODELS  
WX950, WX960 AND WX970 FEATURE HYDRAULIC LOG LIFTERS

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## SECTION INDEX

<b>NOTES</b>	<b>41</b>
<b>WX300 SERIES SPECIFICATIONS</b>	<b>44</b>
<b>WX400 SERIES SPECIFICATIONS</b>	<b>44</b>
<b>TRAILER MODELS MECHANICAL SPECIFICATIONS</b>	<b>44</b>
<b>TRAILER MODELS HYDRAULIC SPECIFICATIONS</b>	<b>46</b>
<b>PUMP KIT SPECIFICATIONS</b>	<b>47</b>
<b>VALVE TYPES</b>	<b>48</b>
<b>TRAILERING</b>	<b>48</b>



## Notes

### **(A) ENGINES**

- 1) Engine must be properly tuned and run at full throttle (3600RPM).
- 2) Vertical shaft engines (WE series) do not have adjustable throttles, they are at full throttle at all times
- 3) Splitter engines do NOT have oil monitor system.
- 4) Chose Honda GX or Subaru engine splitters for Homeowner splitting. Chose Honda GX engines for Commercial splitting.
- 5) Splitter engines are recoil start only.

### **(B) COMMON**

- 1) Assembly hardware is shipped in manual tube.
- 2) Choose splitter tonnage by the type of wood being split. Most woods, particularly straight-grained ones, can be split by a 20-ton splitter, whereas particularly knotty and twisted-grained woods may require a 31 ton splitter.
- 3) Splitter valves feature spring-center on forward. This means that when the handle is released a spring returns the lever to the neutral position so that the cylinder stops moving. They also feature a detent on the reverse. This means that when the handle is moved back to retract the cylinder, it is held in place by a spring, balls and a groove inside the valve. When the cylinder is fully retracted. Pressure buildup inside the valve and disengages the detent and the spring returns the lever to neutral. The hydraulic system pressure relief is incorporated into the splitter valve.
- 4) Cylinders are rebuildable. The end cap threads in using a RH thread
- 5) The maximum recommended split diameter is twice the wedge height.

### **(C) WX300 SERIES**

- 1) Horsepower and Hydraulic requirements MUST be adhered to.
- 2) Horsepower requirements are based on engine HP, not PTO.
- 3) WX300 models come set up for tractors with open-center hydraulic systems. They are not convertible.
- 4) WX300C models come set up for tractors with closed-center hydraulic systems. They are not convertible.
- 5) WX300 and WX300C models require constant hydraulic flow from the auxiliaries of the power unit, via 1 set of remotes (1 pressure line and 1 return line).
- 6) Some tractor models may have safety switches which will prevent the use of auxiliary hydraulics without an operator in the seat.
- 7) WX300 series splitters come standard with hoses and Pioneer Ball-style couplers.
- 8) Cycle times quoted are at the minimum recommended hydraulic flow.
- 9) WX300 and WX300C models are Category I hitch size and Quick-Hitch compatible.

## **(D) WX400 SERIES**

- 1) Horsepower and Hydraulic requirements MUST be adhered to.
- 2) WX400 models come standard with hoses and ½” FlatFace couplers.
- 3) WX400 series splitters are not intended to be flipped over, even though it may be possible. Horizontal versions are not intended to be used in the vertical position.
- 4) WX400 series splitters come standard with ½” FlatFace couplers.
- 5) WX440, WX450, WX460 and WX470 models require constant hydraulic flow from the auxiliaries of the power unit, via 1 set of remotes (1 pressure line and 1 return line).
- 6) Inverted skidsteer models (WX410 and WX430), which do not have a valve, do not require constant flow since they are operated from the skidsteer seat.
- 7) Some skidsteer models may have safety switches which will prevent the use of auxiliary hydraulics without an operator in the seat.
- 8) Cycle times quoted are at the minimum recommended hydraulic flow.

## **(E) WE, WX and WXR TRAILER SERIES**

- 1) Splitters use Dexron3 or 4 ATF as hydraulic fluid.
- 2) Engine-driven splitters feature 2-stage pumps, basically 2 gear pumps in 1 body. Stage 1 is High Volume Low Pressure (HVLP). Its purpose is to move the cylinder quickly when speed is more important than pressure. Stage 2 is High Pressure Low Volume (HPLV). Its purpose is to supply splitting pressure, when pressure is more important than speed. When extending the cylinder to the wood being split, both stages work together to move the cylinder quickly. When the wedge hits the wood, pressure inside the valve causes a checkvalve to close and an unloader valve to open, redirecting all fluid flow through stage 2 to provide splitting pressure. Hydraulic pumps do not have a pressure relief valve.
- 3) WE models are NOT recommended for commercial use.
- 4) WX950, WX960 and WX970 models feature a log lifter with a 750# capacity. The log lifter is operated by a spring-center auxiliary valve which is plumbed in series with the splitter valve. The splitter and log lifter cannot be operated efficiently at the same time. They also feature jockey wheels on the nose instead of just a jack.
- 5) WXR models feature a Regenerative Valve for quicker cycle times. When the valve lever is in the retract position, or the 1<sup>st</sup> of the two extension positions, the return fluid flow from the cylinder, which is normally returned to the tank, is redirected and combined with the flow to the cylinder to increase the cylinder speed. When the lever is pushed to the 2<sup>nd</sup> forward position, the passageway is blocked off to increase pressure from the 2-stage pump and the return fluid flow from the cylinder is sent back to the tank. The average is 17% quicker than standard valves.
- 6) “L” in model number indicates highway lighting, NVIS form and 17 digit serial number for road registration.

## **(F) ACCESSORIES**

- 1) W4180 Pump Kit includes a hydraulic tank which bolts into the 3 Point Hitch A-frame, the pump, a speed-up gearbox with a PTO shaft coupler, a chain to tie off the pump and prevent it from spinning with the PTO shaft, hoses, mounting hardware and a return hydraulic filter. Use Dexron 3 or 4 ATF.

## WX300 SERIES SPECIFICATIONS

MODEL	TYPE	CYLINDER SIZE in	PRESSURE psi	FLOW gpm REQUIRED	SPLIT FORCE ton	SPLIT LENGTH in	CYCLE TIME AVG/FULL sec	WEDGE HEIGHT in
WX310 / C	HORIZONTAL	4.0 X 1.5	3000	10	20	24	6.62 / 13.24	9
WX320 / C	HORIZONTAL	4.5 X 2.5	3000	13	25	36	11.43 / 22.86	10
WX330 / C	HORIZONTAL	4.5 X 2.5	3000	13	25	48	15.24 / 30.48	10
WX350 / C	VERTICAL	4.0 X 1.5	3000	10	20	24	6.62 / 13.24	9
WX360 / C	VERTICAL	5.0 X 2.5	3000	16	31	24	9.73 / 19.47	10
WX370 / C	HOR/VERT	4.0 X 1.5	3000	10	20	24	6.62 / 13.24	9
SEE NOTES	C1, C2, C3, C4, C6 , C8	B4	-	C1, C5	B2	-	C7	B5

## WX400 SERIES SPECIFICATIONS

MODEL	TYPE	CYLINDER SIZE in	PRESSURE psi	FLOW gpm REQUIRED	SPLIT FORCE ton	SPLIT LENGTH in	CYCLE TIME AVG/FULL sec	WEDGE HEIGHT in
WX410	INVERTED	4.0 X 1.5	3000 MAX	10-18	20	24	6.62 / 13.24	9
WX430	INVERTED	4.5 X 2.5	3000 MAX	13-18	25	36	11.43 / 22.86	10
WX440	HORIZONTAL	4.0 X 1.5	3000	10-18	20	24	6.62 / 13.24	9
WX450	HORIZONTAL	4.5 X 2.5	3000	13-18	25	36	11.43 / 22.86	10
WX460	HORIZONTAL	5.0 X 2.5	3000	16-18	31	24	9.73 / 19.47	10
WX470	HOR/VERT	4.0 X 1.5	3000	10-18	20	24	6.62 / 13.24	9
SEE NOTES	D2, D3, D4, D5, D6, D7	B4	D1	D1	B2	-	D8	B5

## TRAILER MODELS MECHANICAL SPECIFICATIONS

MODEL	ENGINE	TYPE	CYLINDER SIZE in	SPLIT FORCE ton	SPLIT LENGTH in	CYCLE TIME AVG/FULL sec	WEDGE HEIGHT in	BED HEIGHT in
<b>WE200 SERIES</b>								
WE220	SUBARU EA190	HORIZONTAL	4.0 X 1.25	20	24	6.62 / 13.24	9	24
WE230	SUBARU EA190	HORIZONTAL VERTICAL	4.0 X 1.25	20	24	6.62 / 13.24	9	31.5

**TRAILER MODELS MECHANICAL SPECIFICATIONS CONTINUED**

<b>MODEL</b>	<b>ENGINE</b>	<b>TYPE</b>	<b>CYLINDER SIZE in</b>	<b>SPLIT FORCE ton</b>	<b>SPLIT LENGTH in</b>	<b>CYCLE TIME AVG/FULL sec</b>	<b>WEDGE HEIGHT in</b>	<b>BED HEIGHT in</b>
<b>WX500 SERIES</b>								
<b>WX510</b>	HONDA GC160	HORIZONTAL	4.0 X 1.25	20	24	6.62 / 13.24	9	16
<b>WX515 WX515L</b>	HONDA GC160	HORIZONTAL	4.0 X 1.25	20	24	6.62 / 13.24	9	19
<b>WX515T</b>	HONDA GC160	HORIZONTAL	4.0 X 1.25	20	24	6.62 / 13.24	9	28
<b>WX520 WX520L</b>	HONDA GX160	HORIZONTAL	4.0 X 1.25	20	24	6.62 / 13.24	9	19
<b>WX520T</b>	HONDA GX160	HORIZONTAL	4.0 X 1.25	20	24	6.62 / 13.24	9	28
<b>WX530 WX530L</b>	HONDA GC160	HORIZONTAL VERTICAL	4.0 X 1.25	20	24	6.62 / 13.24	9	24
<b>WX540 WX450L</b>	HONDA GX160	HORIZONTAL VERTICAL	4.0 X 1.25	20	24	6.62 / 13.24	9	24
<b>WX600 SERIES</b>								
<b>WX615SU</b>	SUBARU EX210	HORIZONTAL	4.5 X 24	25	24	7.62 / 15.24	10	21
<b>WX615TSU</b>	SUBARU SP210	HORIZONTAL	4.5 X 24	25	24	7.62 / 15.24	10	30
<b>WX620 WX620L</b>	HONDA GX200	HORIZONTAL	4.5 X 24	25	24	7.62 / 15.24	10	21
<b>WX620T</b>	HONDA GX200	HORIZONTAL	4.5 X 24	25	24	7.62 / 15.24	10	30
<b>WX630SU WX630SUL</b>	SUBARU SP210	HORIZONTAL VERTICAL	4.5 X 24	25	24	7.62 / 15.24	10	27
<b>WX640 WX640L</b>	HONDA GX200	HORIZONTAL VERTICAL	4.5 X 24	25	24	7.62 / 15.24	10	27
<b>WX615SU</b>	SUBARU EX210	HORIZONTAL	4.5 X 24	25	24	7.62 / 15.24	10	21
<b>WX615TSU</b>	SUBARU SP210	HORIZONTAL	4.5 X 24	25	24	7.62 / 15.24	10	30
<b>WX620 WX620L</b>	HONDA GX200	HORIZONTAL	4.5 X 24	25	24	7.62 / 15.24	10	21

**TRAILER MODELS MECHANICAL SPECIFICATIONS CONTINUED**

MODEL	ENGINE	ORIENTED	CYLINDER SIZE in	SPLIT FORCE ton	SPLIT LENGTH in	CYCLE TIME AVG/FULL sec	WEDGE HEIGHT in	BED HEIGHT in
<b>WXR700 SERIES</b>								
<b>WXR720</b>	HONDA GX200 6.5HP	HORIZONTAL	4.5 X 2.5	27	24	5.35 / 10.7	10	27
<b>WXR740</b>	HONDA GX200 6.5HP	HORIZONTAL VERTICAL	4.5 X 2.5	27	24	5.35 / 10.7	9	27
<b>WX900 SERIES</b>								
<b>WX910/L</b>	HONDA GX270	HORIZONTAL	4.5 X 2.5	25	24	5.24 / 10.48	10	21
<b>WX910T</b>	HONDA GX270	HORIZONTAL	4.5 X 2.5	25	24	5.24 / 10.48	10	28.5
<b>WX920</b>	HONDA GX270	HORIZONTAL	4.5 X 2.5	25	36	7.86 / 15.72	10	21
<b>WX930</b>	HONDA GX270	HORIZONTAL	4.5 X 2.5	25	48	10.48 / 20.96	10	21
<b>WX950</b>	HONDA GX270	HORIZONTAL	4.5 X 2.5	25	24	5.24 / 10.48	10	25
<b>WX960</b>	HONDA GX270	HORIZONTAL	4.5 X 2.5	25	36	7.86 / 15.72	10	25
<b>WX970</b>	HONDA GX27	HORIZONTAL	4.5 X 2.5	25	48	10.48 / 20.96	10	25
<b>WX980/L</b>	HONDA GX270	HORIZONTAL VERTICAL	5.0 X 2.5	31	24	6.69 / 13.38	10	26
<b>WX950/960/970</b>	-	LOG LOADER	3.5 X 1.5	750# LIFT	-	-	-	-
<b>SEE NOTES</b>	A1, A2, A3, A4, A5, E3, E6	E4	B4	B2	-	-	B5	-

**TRAILER MODEL HYDRAULIC SPECIFICATIONS**

MODEL	PUMP TYPE STAGE@gpm	STAGE 1		STAGE 2		RELIEF SETTING psi	TANK CAPACITY l	RETURN FILTER TYPE
		PRESSUREpsi	FLOW gpm	PRESSUREpsi	FLOW gpm			
WE200 SERIES								
WE200 ALL	2 @11	500	8	3000	3	3000	11	SPIN-ON
WX500 SERIES								
WX510	2 @11	600	8	3000	3	3000	11	SPIN-ON

**TRAILER MODELS HYDRAULIC SPECIFICATIONS CONTINUED**

MODEL	PUMP TYPE STAGE@gpm	STAGE 1		STAGE 2		RELIEF SETTING psi	TANK CAPACITY l	RETURN FILTER TYPE
		PRESSUREpsi	FLOW gpm	PRESSUREpsi	FLOW gpm			
WX500 SERIES CONTINUED								
WX515/T/L	2 @ 11	600	8	3000	3	3000	11	SPIN-ON
WX520/T/L	2 @ 11	600	8	3000	3	3000	11	SPIN-ON
WX540/L	2 @ 11	600	8	3000	3	3000	13	SPIN-ON
WX600 SERIES								
WX615SU/T	2 @ 11	600	8	3000	3	3000	11	SPIN-ON
WX620/L/T	2 @ 11	600	8	3000	3	3000	11	SPIN-ON
WX630SU/L	2 @ 11	600	8	3000	3	3000	11	SPIN-ON
WX640/L	2 @ 11	600	8	3000	3	3000	13	SPIN-ON
WXR700 SERIES								
WXR720	2 @ 13	650	3	3000	10	3400	11	SPIN-ON
WXR740	2 @ 13	650	3	3000	10	3400	13	SPIN-ON
WX900 SERIES								
WX910/L/T	2 @ 16	650	12	3000	4	3000	16	SPIN-ON
WX920	2 @ 16	650	12	3000	4	3000	20	SPIN-ON
WX930	2 @ 16	650	12	3000	4	3000	20	SPIN-ON
WX950	2 @ 16	650	12	3000	4	3000	20	SPIN-ON
WX960	2 @ 16	650	12	3000	4	3000	20	SPIN-ON
WX970	2 @ 16	650	12	3000	4	3000	20	SPIN-ON
WX980/L	2 @ 16	650	12	3000	4	3000	17	SPIN-ON
SEE NOTES	E2	-	-	-	-	-	E1	-

**PUMP KIT**

Model	RPM	PUMP		TANK CAPACITY l	RETURN FILTER
		PRESSURE psi	FLOW USgpm		
<b>W4180</b>	540	2450	12	9.5	SPIN-ON
<b>SEE NOTES</b>	F1	-	-	-	-

## VALVE TYPES

MODEL	DETENT RETURN TO NEUTRAL	SPRING RETURN	OPEN/CLOSED CENTER	REGENERATIVE	HANDLE POSITIONS
<b>WX300: ALL</b>	Y	FORWARD	OPEN	N	F-N-R
<b>WX300C: ALL</b>	Y	FORWARD	CLOSED	N	F-N-R
<b>WX440/450/460/470</b>	Y	FORWARD	OPEN	N	F-N-R
<b>WX410/430</b>	N	N	N	N	N
<b>WE200: ALL</b>	Y	FORWARD	OPEN	N	F-N-R
<b>WX500/600/900: ALL</b>	Y	FORWARD	OPEN	N	F-N-R
<b>WX700: ALL</b>	Y	FORWARD	OPEN	Y	F-N-R-POWER
<b>LOG LIFT</b>	N	Y	OPEN	N	F-N-R
<b>SEE NOTES</b>	B3	B3, E4	C3, C4	E5	-

## TRAILERING

MODEL	WHEEL SIZE	HITCH	FENDERS	LIGHTS	SUSPENSION	BRAKES	WHEEL TRACK in	GROUND CLEARANCE
<b>WE200 SERIES</b>								
<b>WE200 ALL</b>	4.80-8LRB	2" BALL	N	N	N	N	34	7
<b>WX500 SERIES</b>								
<b>WX510</b>	4.10-6 NHS	CLEVIS	N	N	N	N	32.5	5.25
<b>WX515/T</b>	4.80-8LRB	2" BALL	Y	WX515L	N	N	34.0	7.0
<b>WX520/T</b>	4.80-8LRB	2" BALL	Y	WX520L	N	N	34.0	7.0
<b>WX530</b>	4.80-8LRB	2" BALL	Y	WX530L	N	N	42.0	7.25
<b>WX540</b>	4.80-8LRB	2" BALL	Y	WX540L	N	N	42.0	7.25
<b>WX600 SERIES</b>								
<b>WX615SU/T</b>	4.80-8LRB	2" BALL	Y	N	N	N	34.0	7.0
<b>WX620/T</b>	4.80-8LRB	2" BALL	Y	WX620L	N	N	34.0	7.0
<b>WX630SU</b>	4.80-8LRB	2" BALL	Y	WX630SUL	N	N	42.0	7.0
<b>WX640</b>	4.80-8LRB	2" BALL	Y	WX640L	N	N	42.0	7.0
<b>WXR700 SERIES</b>								
<b>WXR720</b>	4.80-8LRB	2" BALL	Y	WXR720L	N	N	34.0	7.125



**TRAILERING CONTINUED**

<b>MODEL</b>	<b>WHEEL SIZE</b>	<b>HITCH</b>	<b>FENDERS</b>	<b>LIGHTS</b>	<b>SUSPENSION</b>	<b>BRAKES</b>	<b>WHEEL TRACK in</b>	<b>GROUND CLEARANCE</b>
<b>WXR700 SERIES CONTINUED</b>								
<b>WXR740</b>	4.80-8LRB	2" BALL	Y	WXR740L	N	N	42.0	7.125
<b>WX900 SERIES</b>								
<b>WX910/T</b>	5.30-12LRB	2" BALL	Y	WX910L	N	N	41.625	8.875
<b>WX920</b>	5.30-12LRB	2" BALL	Y	N	N	N	41.625	8.875
<b>WX930</b>	5.30-12LRB	2" BALL	Y	N	N	N	41.625	8.875
<b>WX950</b>	5.30-12LRB	2" BALL	Y	N	N	N	41.625	9.5
<b>WX960</b>	5.30-12LRB	2" BALL	Y	N	N	N	41.625	9.5
<b>WX970</b>	5.30-12LRB	2" BALL	Y	N	N	N	41.625	9.5
<b>WX980</b>	5.30-12LRB	2" BALL	Y	WX980L	N	N	41.625	8
<b>SEE NOTES</b>	-	-	-	E6	-		-	-

## Section 6

# WOOD PROCESSORS

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**WP200 3 POINT HITCH 25 TON SERIES FEATURING HYDRAULIC WINCH, HANDS-FREE RETURN-TO –NEUTRAL VALVE.**

- **WP235 MODEL WITH 24” SPLIT OPENING**
- **WP265 MODEL WITH 36” SPLIT OPENING**

**WP600 ECONOMY 25 TON TRAILER MOUNTED ENGINE DRIVE SERIES FEATURING HYDRAULIC WINCH, HANDS-FREE RETURN-TO –NEUTRAL VALVE.**

- **WP635 WITH 9HP ENGINE, 24” SPLIT OPENING**

**WP800 25 TON TRAILER MOUNTED ENGINE DRIVE SERIES FEATURING HYDRAULIC WINCH, AUTOCYCLE VALVE**

- **WP835 MODEL WITH 14HP ENGINE, 24” SPLIT OPENING**
- **WP835 MODEL WITH 14HP ENGINE, 36” SPLIT OPENING**

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## SECTION INDEX

<b>NOTES:</b>	<b>51</b>
<b>WOOD PROCESSOR FEATURES</b>	<b>54</b>
<b>WINCH SPECIFICATIONS</b>	<b>54</b>
<b>WP200 SERIES EQUIPMENT MATCHING</b>	<b>54</b>
<b>PUMP KIT SPECIFICATIONS</b>	<b>54</b>
<b>WP600/WP800 PERFORMANCE</b>	<b>55</b>
<b>WP600/WP800 TRAILERING</b>	<b>55</b>
<b>WP600/WP800 FLUIDS AND FILTERS</b>	<b>55</b>

## Notes

### **(A) ENGINES**

- 1) Engine must be properly tuned and run at full throttle (3600RPM).
- 2) Wood Processor engines have oil sentry system. The engine will shut down if oil level is low.
- 3) WP635 9HP engine is recoil start only
- 4) WP835 and WP835 14HP engines are electric start with recoil backup.

### **(B) WP200 SERIES**

- 1) Horsepower and Hydraulic requirements **MUST** be adhered to.
- 2) Horsepower requirements are based on engine HP, not PTO.
- 3) For tractors without auxiliary hydraulics we offer the P300 Pump Kit.
- 4) WP200 models come set up for tractors with Open-Center hydraulic systems.
- 5) Tractors with Closed-Center hydraulics require the P400 Closed Center kit or the P300 Pump Kit.
- 6) WP200 models require constant hydraulic flow from the auxiliaries of the power unit, via 1 set of remotes (1 pressure line and 1 return line).
- 7) WP200 series splitters come standard with hoses and Pioneer Ball-style couplers. The hoses are colour-coded. Red for Pressure and Black for Tank.
- 8) Cycle times quoted are at the minimum and maximum recommended flow from the tractor.
- 9) Some tractor models may have safety switches which will prevent the use of auxiliary hydraulics without an operator in the seat
- 10) Cylinders are rebuildable. The end cap threads in using a RH thread.
- 11) WP200 models are Category I/II hitch size and are NOT Quick-Hitch compatible.
- 12) WP200 models **CANNOT** be converted to AutoCycle operation due to insufficient flow for the valve's requirement of 22GPM
- 13) Split course quoted will depend on tractor hydraulic system.
- 14) Splitter valves feature spring-center on forward. This means that when the handle is released a spring returns the lever to the neutral position so that the cylinder stops moving. They also feature a detent on the reverse. This means that when the handle is moved back to retract the cylinder, it is held in place by a spring, balls and a groove inside the valve. When the cylinder is fully retracted. Pressure buildup inside the valve and disengages the detent and the spring returns the lever to neutral. The hydraulic system pressure relief is incorporated into the splitter valve.
- 15) Choker must be used with synthetic rope on winch do to abrasion damage.

## **(C) WP600 SERIES**

- 1) WP600 MODELS feature 2-stage pumps, basically 2 gear pumps in 1 body. Stage 1 is High Volume Low Pressure (HVLP). Its purpose is to move the cylinder quickly when speed is more important than pressure. Stage 2 is High Pressure Low Volume (HPLV). Its purpose is to supply splitting pressure, when pressure is more important than speed. When extending the cylinder to the wood being split, both stages work together to move the cylinder quickly. When the wedge hits the wood, pressure inside the valve causes a checkvalve to close and an unloader valve to open, redirecting all fluid flow through stage 2 to provide splitting pressure. Hydraulic pumps do not have a pressure relief valve.
- 2) WP600 models do NOT feature AutoCycle operation. They CANNOT be converted to Autocycle operation due to insufficient flow for the valve's requirement of 22GPM.
- 3) Splitter valves feature spring-center on forward. This means that when the handle is released a spring returns the lever to the neutral position so that the cylinder stops moving. They also feature a detent on the reverse. This means that when the handle is moved back to retract the cylinder, it is held in place by a spring, balls and a groove inside the valve. When the cylinder is fully retracted. Pressure buildup inside the valve and disengages the detent and the spring returns the lever to neutral. The hydraulic system pressure relief is incorporated into the splitter valve.
- 4) Cylinders are rebuildable. The end cap threads in using a RH thread.
- 5) WP600s do NOT have highway lights, axle suspension or a NVIS.
- 6) Choker must be used with synthetic rope on winch.

## **(D) WP800 SERIES**

- 1) WP800 MODELS feature 2-stage pumps, basically 2 gear pumps in 1 body. Stage 1 is High Volume Low Pressure (HVLP). Its purpose is to move the cylinder quickly when speed is more important than pressure. Stage 2 is High Pressure Low Volume (HPLV). Its purpose is to supply splitting pressure, when pressure is more important than speed. When extending the cylinder to the wood being split, both stages work together to move the cylinder quickly. When the wedge hits the wood, pressure inside the valve causes a checkvalve to close and an unloader valve to open, redirecting all fluid flow through stage 2 to provide splitting pressure. Hydraulic pumps do not have a pressure relief valve.
- 2) WP800 models feature AutoCycle operation. The splitter valve has 2 spools. 1 controls the cylinder extension and the other controls cylinder retraction. To operate this valve, pull BOTH levers down into detent. They are held in detent by a ball, spring and groove arrangement. The cylinder extends to its limit. At the end of the stroke, pressure buildup inside the valve will release the detent allowing fluid to flow through the return spool. The cylinder will retract. At the end of the stroke, pressure buildup inside the valve will release the detent causing the spool to return to neutral, The cycle stops until the next time the levers are activated. The levers may be used independently to extend or retract the cylinder without going through the complete cycle.
- 3) WP800 models feature a dump valve to speed up return of the cylinder and aid the functioning of the AutoCycle Valve. Pressure on the return side of the piston opens the dump valve to provide a second return line to the tank.
- 4) WP800s include highway lights, TorFlex axles, NVIS, and a 17 digit VIN for registration.
- 5) Cylinders are rebuildable. The end cap threads in using a RH thread.
- 6) Choker must be used with synthetic rope on winch.

## **(E) ACCESSORIES**

- 1) P300 Pump Kit includes a hydraulic tank which bolts into the 3 Point Hitch A-frame, the pump, a speed-up gearbox with a PTO shaft coupler, a chain to tie off the pump and prevent it from spinning with the PTO shaft, hoses, mounting hardware and a return hydraulic filter. Use Dexron 3 or 4 ATF.
- 2) P400 Closed Center kit includes replacement Closed Center splitter valve, Closed Center conversion plug for winch valve, and necessary hoses and fittings. The valve plumbing must be reconfigured from series to parallel.
- 3) P200 Pivoting Chainsaw Holder requires saw with 2 bar studs. Captive nuts will require pressing out. 1-2 inches of cut length may be lost. Recommended minimum bar length is 22"
- 4) P200 no longer includes Weld-On Mounting Bracket part # 2089L595. This currently comes mounted to the Wood Processor. For older models, please check if the bracket is already there. If not, please order the bracket with the P200. It will be sent no charge.

## WOOD PROCESSOR FEATURES

MODEL	MOUNT	POWER SOURCE	HYDRAULIC WINCH	MAXIMUM LOG Ø in	CYLINDER Ø in	SPLIT OPENING in	SPLIT LENGTH in	AUTO CYCLE
WP235	3-PH	TRACTOR	Y	22	4.5 X 2.5	24	22	N
WP265	3-PH	TRACTOR	Y	22	4.5 X 2.5	36	36	N
WP635	TRAILER	SUBARU EX27	Y	22	4.5 X 2.5	24	22	N
WP835	TRAILER	SUBARU EX40 E	Y	22	4.5 X 2.5	24	22	Y
WP865	TRAILER	SUBARU EX40 E	Y	22	4.5 X 2.5	36	36	Y
SEE NOTES	B9	A1, A2, A3, A4 B10	B13, C5, D6	-	B9, C4, D5	-	-	B12, C2, D2

## WINCH SPECIFICATIONS

TYPE	DRIVE	LEVER POSITIONS	PULL lb	SPEED fpm	ROPE
1-SPEED	HYDRAULIC WITH SLIDING GEAR	N / FREEWHEEL, DRIVE	1550	15	¼" X 50'
SEE NOTES	-	-	-	-	B13, C5, D6

## WP200 SERIES EQUIPMENT MATCHING

MODEL	TRACTOR HP MINIMUM	HITCH CATEGORY	QUICK-HITCH?	PRESSURE psi	FLOW gpm REQUIRED	CYLINDER DIAMETER	SPLIT FORCE ton	FULL CYCLE sec
WP235	45	I/II	N	2550-3000	12-18	4.5 X 2.5	20-25	8.51/12.81
WP265	60	1/II	N	2500-3000	12-18	4.5 X 2.5	20-25	13.20/19.79
SEE NOTES	B1, B2, B3, B4, B5, B6, B7	B11	B10	-	B1, B3, B6, B7	-	B12	B12

## PUMP KIT SPECIFICATIONS

PUMP KIT	PRESSURE psi	FLOW gpm	FLUID TYPE	FLUID CAPACITY L
P300	2900	14.1	DEXRON3 OR 4 ATF	27.0
SEE NOTES	-	-	-	-

**WP600/WP800 PERFORMANCE**

MODEL	PUMP TYPE STAGE@gpm	STAGE 1		STAGE 2		RELIEF SETTING psi	SPLIT FORCE ton	FULL CYCLE sec
		PRESSUREpsi	FLOW gpm	PRESSUREpsi	FLOW gpm			
WP635	2 @ 16	650	12	3000	4	3000	25	11-14
WP835	2 @ 22	650	15	3000	7	3000	25	10-12
WP865	2 @ 22	650	15	3000	7	3000	25	11-13
SEE NOTES	C1, D1	-	-	-	-	-	-	E3

**WP600/800 TRAILERING**

MODEL	WHEEL SIZE	HITCH	FENDERS	LIGHTS	SUSPENSION	TRACK in	GROUND CLEARANCE
WP635	5.30X12	2" BALL	Y	N	N	54.5	10.5
WP835	5.30X12	2" BALL	Y	Y	Y	53.75	7.75
WP865	5.30X12	2" BALL	Y	Y	Y	53.75	7.75
SEE NOTES	-	-	-	C5, D4	C5, D4	-	-

**WP600/WP800 FLUID AND FILTERS**

MODEL	SUCTION FILTER	RETURN FILTER	FLUID TYPE	FLUID CAPACITY L
WP600	N	SPIN-ON	DEXRON3 OR 4 ATF	31.0
WP835	IN-TANK SCREEN	SPIN-ON	DEXRON3 OR 4 ATF	31.0
WP865	IN-TANK SCREEN	SPIN-ON	DEXRON3 OR 4 ATF	31.0
SEE NOTES	-	-	-	-

## Section 7

# MANURE SPREADERS

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### **MX-G GROUND DRIVE SERIES FEATURING WHEEL-DRIVEN APRON CHAIN AND BEATER**

- **MX25 25 BUSHEL MODEL**
- **MX50G 50 BUSHEL MODEL**
- **MX80G 80 BUSHEL MODEL**

### **MX-P PTO DRIVE SERIES FEATURING PTO-DRIVEN APRON CHAIN AND BEATER**

- **MX50P 50 BUSHEL MODEL**
- **MX80P 80 BUSHEL MODEL**

### **MX130 PTO DRIVE SERIES FEATURING PTO-DRIVEN APRON CHAIN AND BEATER AND CLEAN-OUT FUNCTION**

- **MX130 130 BUSHEL MODEL WITH RIBBED OFF-ROAD TIRES**
- **MX130t WITH 11R22.5 TRUCK TIRES**

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## SECTION INDEX

<b>NOTES:</b>	<b>57</b>
<b>GROUND DRIVE SPECIFICATIONS</b>	<b>59</b>
<b>PTO DRIVE SPECIFICATIONS</b>	<b>60</b>



## **NOTES**

### **(A) GROUND DRIVE MODELS**

- 1) Ground Drive is a ratchet arrangement. The drive plate has formed teeth on the face and is splined to the wheel hub, so that it is free to slide along the splines. The teeth are formed so that they will engage when driven forward (clockwise) but will disengage when reversed (counterclockwise). The driven plate has cutouts on the face to accept the drive teeth and is fixed to the axle shaft and keyed to the sprocket for the beater bar drive chain using setscrews. The drive plate is engaged to the driven plate by a spring. Each wheel has its own drive ratchet. This allows the arrangement to drive when one or both wheels are moving, slip when backing up, and the inside wheel to slip in tight turns. Slipping causes the clicking noise that is heard under these circumstances. The apron chain is driven off the beater bar via chain and sprockets.
- 2) Beater drive engagement is via an On/Off lever which engages the drive chain to the teeth of the drive sprocket. Beater speed is controlled by ground speed.
- 3) The speed control does not change the travel speed of the apron chain. It is a ratchet arrangement which changes how far the chain travel between clicks, thus varying the amount of material fed to the beater bar. The apron drive is controlled by a 4-position lever: Off/Slow/Medium/Fast.
- 4) Ground Drive models do not have a cleanout function.
- 5) Beater paddles are welded on and are not individually replaceable.
- 6) Listed capacities are heaped.

### **(B) MX50P AND MX80P PTO DRIVE MODELS**

- 1) Input shaft power is transferred to the side-mounted driveshaft by belts and pulleys. The beater bar is driven off a 90° gearbox.
- 2) The apron chain is driven off the beater bar by chain and sprockets.
- 7) Beater drive engagement is via the tractor's PTO engagement. Beater speed is controlled by tractor PTO RPM.
- 3) The speed control does not change the travel speed of the apron chain. It is a ratchet arrangement which changes how far the chain travel between clicks, thus varying the amount of material fed to the beater bar. The apron drive is controlled by a 4-position lever: Off/Slow/Medium/Fast.
- 4) These models do not have a cleanout function.
- 5) Beater paddles are welded on and are not individually replaceable.
- 6) Listed capacities are heaped.

### **(C) MX130 AND MX130T PTO DRIVE MODELS**

- 1) Input shaft power is transferred to the side-mounted driveshaft by belts and pulleys. The beater bar is driven off a 90° gearbox with selectable output speeds.
- 2) The apron chain is driven off the 2<sup>nd</sup> output shaft from the gearbox by chain and sprockets.
- 3) Beater drive engagement is via the tractor's PTO engagement. Beater speed is controlled by tractor PTO RPM.

4) Feed control is via a rope operated lever rope pulled by the operator. A cable relays the control to the gearbox.

The lever has 5 positions:

1] LOW: Beater On, Apron Slow

2] OFF: Beater On, Apron Off

3] HIGH: Beater On, Apron Slow

4] CLEANOUT: Beater Off, Apron Fast

5] RETURN: disengages ratchet holding lever in selected position and returns lever to #1 position.

5) These models have a cleanout function.

6) Beater and apron drives are protected by individual shearbolts.

7) Beater paddles are bolted on and individually replaceable.

8) Listed capacities are heaped.

## **(D) ACCESSORIES**

1) All accessories can be installed in the field and include all necessary parts and hardware.

2) M7550 Fines Pan is manually operated, not hydraulic.

3) M7570 End Gate is manually operated, not hydraulic.

4) M7580 End Gate is manually operated, not hydraulic.

5) M7590 Fines Pan is manually operated, not hydraulic.

6) M7610 Fines Pan is manually operated, not hydraulic.

7) M7620 Fines Pan features hydraulic operation. It comes standard with hoses and Pioneer Ball-style couplers

8) M7630 End Gate features hydraulic operation. It comes standard with hoses and Pioneer Ball-style couplers

9) M7640 Upper Beater is driven off lower beater by chain and sprockets. It includes beater, mounting flanges, bearings, chain, sprockets and chain adjuster along with hardware. Paddles are welded to beater shaft and are not individually replaceable.

## GROUND DRIVE SPECIFICATIONS

MODEL/SPEC	MX25	MX50G	MX80G
RECOMMENDED HP	15-25	15-30	20-45
BEATER DRIVE	CHAIN & SPROCKET	CHAIN & SPROCKET	CHAIN & SPROCKET
APRON DRIVE	CHAIN & SPROCKET	CHAIN & SPROCKET	CHAIN & SPROCKET
CAPACITY BUSHEL / cu.ft.	25 / 31.25	50 / 62.5	80 / 100
WHEEL TRACK in	41.75	52.75	58.75
GROUND CLEARANCE in	7.25	9.75	10.0
LOADING HEIGHT in	29	35.5	37
TIRES/BOLTS	6 X 12/5	7.6 X 15/5	7.6 X 15/5
TREAD TYPE	LUG	LUG	LUG
PADDLES #	8 (WELDED)	10 (WELDED)	10 (WELDED)
HITCH TYPE	CLEVIS	CLEVIS	CLEVIS
FLOOR MATERIAL	T&G POLY BOARDS	T&G POLY BOARDS	T&G POLY BOARDS
BOX CONSTRUCTION	CR CARBON STEEL	CR CARBON STEEL	CR CARBON STEEL
APRON CHAIN TYPE	662	662	662
APRON CHAIN SPEEDS	FAST / MEDIUM / SLOW / OFF	FAST / MEDIUM / SLOW / OFF	FAST / MEDIUM / SLOW / OFF
CLEANOUT FUNCTION	N	N	N
SEE NOTES	A1, A2, A3, A4, A5, A6	A1, A2, A3, A4, A5, A6	A1, A2, A3, A4, A5, A6

## PTO DRIVE SPECIFICATIONS

MODEL/SPEC	MX50P	MX80P	MX130	MX130T
HP	18-30	25-45	45-75	45-75
BEATER DRIVE	BELT/WORM GEARBOX	BELT/WORM GEARBOX	BELT/WORM GEARBOX	BELT/WORM GEARBOX
APRON DRIVE	CHAIN & SPROCKET	CHAIN & SPROCKET	CHAIN & SPROCKET	CHAIN & SPROCKET
CAPACITY bushel/ cu.ft.	50/62.5	80/100	130/162.5	130/162.5
WHEEL TRACK in	55.25	56.25	67	78.5
GROUND CLEARANCE in	9.0	9.0	9.25	15.25
LOADING HEIGHT in	35.5	37	42	48
TIRES / BOLTS	7.6 X 15 / 5	7.6 X 15 / 5	11L-15SL / 6	11R22.5 / 8
TREAD TYPE	RIB	RIB	RIB	RIB
PADDLES #	10 (WELDED)	10 (WELDED)	10 (REPLACEABLE)	10 (REPLACEABLE)
BHITCH TYPE	CLEVIS	CLEVIS	CLEVIS	CLEVIS
FLOOR MATERIAL	T&G POLY BOARDS	T&G POLY BOARDS	T&G POLY BOARDS	T&G POLY BOARDS
BOX CONSTRUCTION	CR CARBON STEEL	CR CARBON STEEL	CR COR10 WEATHERED STEEL	CR COR10 WEATHERED STEEL
APRON CHAIN TYPE	662	662	667X	667X
APRON CHAIN SPEEDS	FAST/MEDIUM SLOW OFF	FAST/MEDIUM/SLOW/OFF	FAST/ SLOW / OFF	FAST/SLOW/OFF
CLEANOUT FUNCTION	N	N	Y: HIGH, BEATER OFF	Y: HIGH, BEATER OFF
SEE NOTES	B1, B2, B3, B4, B5, B6	B1, B2, B3, B4, B5, B6	C1, C2, C3, C4, C5, C6, C7, C8	C1, C2, C3, C4, C5, C6, C7, C8

## Section 8

# LOGGING WINCHES AND SKIDDING PLATES

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### **FX 3- POINT HITCH SKIDDING WINCH SERIES**

- **FX35 COMPACT MODEL FEATURING 2-SPEED HYDRALIC HINCH NAD SYNTHETIC ROPE**
- **FX66 ECONOMY MODEL FEATURING PTO DRIVEM ROPE-ACTIVATED CLUTCH AND STEEL CABLE**
- **FX85/110/140 MODELS PTO DRIVE, ROPE-ACTIVATED CLUTCH, LOWER SNATCHBLOCK, KEYHOLE SLIDERS AND LOWER SNATCHBLOCK.**
- **FX-R REMOTE CONTROL MODELS FEATURING HYDRAULIC CLUTCH ACTUATON OPRERATED BY KEY FOB REMOTE CONTROL.**

### **FXP 3-POINT HITCH SKIDDING PLATE SERIES**

- **FXP20 FOR CATEGORY 1 MOUNTING**
  - **FXP30 FOR CATEGORY 2 MOUNTING**
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## SECTION INDEX

<b>NOTES</b>	<b>62</b>
<b>WINCH EQUIPMENT MATCHING</b>	<b>65</b>
<b>WINCH FEATURES</b>	<b>65</b>
<b>WINCH PERFORMANCE</b>	<b>66</b>
<b>SKIDDING PLATE FEATURES</b>	<b>66</b>

## NOTES

### **(A) FX35**

- 1) Horsepower and Hydraulic requirements MUST be adhered to.
- 2) Horsepower requirements are based on engine HP, not PTO.
- 3) FX35 requires constant hydraulic flow from the auxiliaries of the power unit, via 1 set of remotes (1 pressure line and 1 return line).
- 4) FX35 comes standard with hoses and Pioneer Ball-style couplers.
- 5) FX35 features a 2-speed hydraulic winch, no PTO is required.
- 6) Winch engagement has 3 positions: High, Low, Neutral. Neutral is freewheel, the winch does not power out. A friction pad riding on the outer rim of the cable spool prevents the drum from spooling out too fast, which would cause tangling of the rope. Engage is by sliding gear. There is no transport lock, See note B8.
- 7) Dozer blade on bottom of winch frame helps unit dig in when winching. It also provides a backstop for the logs when wicking and towing. It can be used to push logs when piling.
- 8) Chain slots are provided in the frame to hook logs to. Do not tow logs with the hydraulic winch.
- 9) Chokers MUST be used on logs due to the synthetic rope.

### **(B) FX66, FX85, FX110, FX140**

- 1) Horsepower and Hydraulic requirements MUST be adhered to.
- 2) Horsepower requirements are based on engine HP, not PTO.
- 3) Winch is engaged by pulling on engagement rope, harder pull on rope = harder pull from winch. Otherwise, slipping and pad glazing will result.
- 4) The PTO driveline MUST be measured and cut as per the Owner's Manual. Failure to do so will result in damage to both the tractor and the implement
- 5) PTO input power is transferred to the upper sprocket by chain.  
The upper sprocket has the friction material bolted to the face. This acts as the drive plate.  
The driven plate is machined into the cable spool end. The cable spool slides back and forth along the shaft on FiberGlide bearings. The 2 are kept apart by 3 cup springs.  
The clutch actuator is made of 2 steel blocks with 3 decreasing-depth ramps machined into the mating face of each one. Each ramp has a steel ball. One block is held stationary, the other rotates.  
Pulling on the engagement rope rotates the inner actuator block. As it rotates, the balls riding in the ramps push it away from the stationary block. This pushes the cable spool along the shaft until it is pushed against the friction pads on the drive plate, which causes the drum to turn.  
A friction pad riding on the outer rim of the cable spool prevents the drum from spooling out too fast, which would cause tangling of the cable.
- 6) PTO winches are in freewheel unless clutch or transport lock is engaged.
- 7) Transport lock is a dog-and-pawl arrangement. The dogs are teeth cut into the outer rim of 1 of the cable spool ends. Pulling the rope pivots the pawl to engage the dogs, pulling the rope again disengages the lock. The

transport lock can be used to tow logs while driving, or to prevent the cable from freespooling if the rope is let go while winching logs uphill.

- 8) Never reel the cable in without a load on. It will cause the cable to bunch up and kink on the drum.
- 9) Cable end must be used as a choker. The end is not to be used as a stop for the keyhole sliders.
- 10) Proper adjustment of the clutch is critical to obtaining full pulling power and maximum life from the winch.
- 11) Dozer blade on bottom of winch frame helps unit dig in when winching. It also provides a backstop for the logs when winching and towing. It can be used to push logs when piling.
- 12) Longer or larger cables than supplied are not recommended. The drums are sized to meet Health & Safety Laws regarding percentage of drum used.
- 13) For customers experiencing excessive PTO shaft angle, we offer the LW9102 Hitch Extension Kit. It spaces the winch 4" further from the tractor, effectively reducing the driveshaft angle.
- 14) Chain slots are provided in the frame to hook logs to for towing.
- 15) The lower snatchblock, if equipped, provides a way of adjusting the cable pull angle if required.

### **(C) FX85R, FX110R, FX140R**

- 1) Remote winch operation is identical to regular winch, except for engagement. A hydraulic cylinder is used to rotate the actuator. The cylinder is controlled by an electric solenoid valve. The valve is controlled by a remote receiver via a relay. The receiver is controlled by a key fob sized transmitter. 2 buttons must be pressed at the same time, the top RH and the bottom LH to operate the system. The clutch is in The wiring harness does not have a plug. It is up to the customer to supply one which matches the tractor. Red is positive, black is ground Neutral (Freewheel) unless Both buttons are pressed and held. The system is powered by the tractor. See also notes B5, B6, B7, B8, B9, B10.
- 2) FX-R models require 1-2GPM hydraulic flow and 12V electric power from the tractor. The wiring harness does not have a plug. It is up to the customer to supply one which matches the tractor. Red is positive, black is negative.
- 3) FX-R models come standard with hoses and Pioneer Ball-style couplers
- 4) Remote transmitter is rechargeable using a cell phone charger with a Micro USB end. Older transmitter versions require 2 AAA batteries.
- 5) Current FX-R models have no way of engaging the winch if the remote is lost or not functioning. This will be changed in a mid-year model update. We can supply directions on how to wire in a bypass switch on models not equipped.
- 6) Remote control is available as a field-installable accessory kit.
- 7) See also notes B5, B6, B7, B8, B9, B10, B11, B12, B13

### **(D) FXP20 AND FXP30**

- 1) Horsepower requirements MUST be adhered to.

- 2) Horsepower requirements are based on engine HP, not PTO.
- 3) Skidding Plates are designed to offer a pickup attachment point for skidding logs.
- 4) Dozer blade on bottom of frame provides a backstop for the logs when towing. It can be used to push logs when piling.

## **(E) ACCESSORIES**

- 1) Self-Releasing SnatchBlock has a load limit of 19,050 lbs. The WLL (Working Load Limit) printed on the strap is for overhead, lifting, with a safety factor of 1:3. The WLL in this application is 19,050.
- 2) Chain chokers are 5/16 grade 70.
- 3) Chokers have a load limit of 4,700 lbs
- 4) Chokers must be used with optional synthetic rope.
- 5) Optional synthetic rope is easier to work with, particularly in Winter. However, the operator must take more care regarding abrasion.



## WINCH EQUIPMENT MATCHING

MODEL	TRACTOR HP	HITCH CATEGORY	QUICK HITCH	HYDRAULIC REQUIREMENT	ELECTRICAL REQUIREMENT	PTO HEIGHT in
<b>FX35</b>	15-30	1	N	2-12	N	N
<b>FX66</b>	30-60	1	N	N	N	16.38
<b>FX85</b>	30-60	1	N	N	N	16.38
<b>FX110</b>	45-100	1	N	N	N	20.96
<b>FX140</b>	60-140	2	N	N	N	22.15
<b>FX85R</b>	30-60	1	N	1-2	12V	16.38
<b>FX110R</b>	45-100	1	N	1-2	12V	20.96
<b>FX140R</b>	60-140	2	N	1-2	12V	22.15
<b>SEE NOTES</b>	A1, A2, B1, B2	-	-	A2, A3, A4, A5, B2, C1, C2, C3, C5, C6	C1, C2, C3, C5, C6	A5

## WINCH FEATURES

MODEL	DRIVE	CLUTCH TYPE	ENGAGEMENT	STANDARD CABLE	KEYHOLE SLIDERS	SNATCH BLOCK	2" RECEIVER HITCH
<b>FX35</b>	HYDRAULIC	N	2-SPEED SLIDING GEAR	5/16" X 80' SYNTHETIC	N	N	N
<b>FX66</b>	PTO TO CHAIN & SPROCKETS	MECHANICAL DRY DISC	ROPE,BALL AND RAMP	3/8" STEEL 165'	N	N	N
<b>FX85</b>	PTO TO CHAIN & SPROCKETS	MECHANICAL DRY DISC	ROPE,BALL AND RAMP	3/8" STEEL 165'	2	Y	Y
<b>FX110</b>	PTO TO CHAIN & SPROCKETS	MECHANICAL DRY DISC	ROPE, BALL AND RAMP	7/16" STEEL 165'	2	Y	Y
<b>FX140</b>	PTO TO CHAIN & SPROCKETS	MECHANICAL DRY DISC	ROPE,BALL AND RAMP	1/2" STEEL 165'	2	Y	Y
<b>FX85R</b>	PTO TO CHAIN & SPROCKETS	MECHANICAL DRY DISC	HYDRAULIC, BALL & RAMP	3/8" STEEL 165'	2	Y	Y
<b>FX110R</b>	PTO TO CHAIN & SPROCKETS	MECHANICAL DRY DISC	HYDRAULIC BALL & RAMP	7/16" STEEL 165'	2	Y	Y
<b>FX140R</b>	PTO TO CHAIN & SPROCKETS	MECHANICAL DRY DISC	HYDRAULIC, BALL & RAMP	1/2" STEEL 165'	2	Y	Y
<b>SEE NOTES</b>	A3, A5, B4, B5 B12, C1, C12	A5, B5, B9, C1	A6, B5, B6, B7, C1, C2, C5, C6	A9, B8, B9, B12, B14, E4, E5	B8	B14	-

**WINCH PERFORMANCE**

MODEL	INPUT RPM	LINE PULL lb	LINE SPEED ft/min
FX35	N	3,500	22 - 260
FX66	540	6,600	96 - 238
FX85/R	540	8,500	96 - 238
FX110/R	540	11,000	98 - 253
FX140/R	540	14,000	98 - 246
SEE NOTES	B7	B7	B7

**SKIDDING PLATE FEATURES**

MODEL	MAXIMUM HP	HITCH CATEGORY	CHAIN HOLDER SLOTS	SADDLE HOOKS	2” RECIEVER HITCH
FXP20	40	1	4	1	Y
FXP30	80	1 & 2	4	2	Y
SEE NOTES	D1, D2	D3, D4	-	-	-

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