WALLENSTEIN

By EMB Manufacturing









TechBook
Sales, Parts and Service Reference

2015 rev 0

Index

ENGINE SPECIFICATION NUMBERS

PRODUCT	MFR	MODEL	HP/ CC	SPEC #	FUEL USE usgpm FULL LOAD approx
GENERATORS	HONDA	GC160	5.0 / 160	LAVXC	0.32
		GX160	5.5 / 160	U1VX2	0.47
		GX200	6.5 / 196	TVX26	0.44
		GX270 R/S	9.0 / 270	UVX2	0.53
		GX270 E/S	9.0 / 270	UVXE6	0.53
		GX340	11.0 / 389	KVXE6	0.72
		GX390	13.0 / 389	UVXE6	0.87
		GX620	20.0 / 614	KVAF6	1.67
		GX630	20.0 / 688	RVXE1	1.67
	KOHLER	KD350	6.7 / 349	PAKD3504001/A	0.36
	KUBOTA	OC95-E3	9.4 / 416	OC95E3G1GX	0.56
	SUBARU	EX170	5.7 / 169	DE5220	0.32
CHIPPERS	HONDA	GX270	9.0 / 270	UT2QH26	0.53
		GX390	13.0 / 389	KQAE6	0.87
		GX670	24.0 / 670	TXF2	1.7
		GX690	24.0 / 688	RTXF	1.77
	KOHLER	CH980S	38.0 / 999	CH980-0002	3.0
	KUBOTA	V3600T	85.6 / 3620	V3600-T-E3B	3.0
	SUBARU	SP210	7.0 / 211	DT1031	0.44
		EX270	9.0/265	DE5012	0.73
		EX400	14.0 / 404	DE5011	0.94
		EH722EFI	28.0 / 720	DS5010	1.6
SPLITTERS	HONDA	GCV160	5.0 / 160	LA0N5MF	0.32
		GC160	5.0 / 160	LAQHC	0.32
		GX160	5.5 / 160	T1QH6	0.47
		GX200	6.5 / 270	UT2QH26	0.44
		GX270	9.0 / 270	UT2QH26	0.53
	SUBARU	EA190V	5.8 / 189	50060	0.33
		SP210	7.0 / 211	DM2120	0.44
		EX170	5.7 /169	DM2230	0.32
		EX400	14.0 / 404	DS6060	0.73
POWERPACK	HONDA	GX160	5.5 / 160	U1VX2	0.47
	SUBARU	SP210	7.0 / 211	DT1031	0.44
		EX270	9.0 / 265	DE5012	0.73

General Notes on Engine Powered Product

1) Please read the supplied Engine Owner's Manual prior to operating the product and follow its direction for use and maintenance.
2) EMB does not cover the engine for warranty. The engine manufacturer does.
3) Engines must be properly tuned and run at full throttle (3600 RPM) in order for the product to operate at maximum efficiency. Operators my try running the engine at lower throttle in order to try and conserve fuel, reduce noise or increase engine lifespan. However, this is counterproductive.
4) 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. A look at the spark plug electrode would tell the story as well. Such lean running will cause whitish deposits to build up on the electrode. Most engine manufacturers recommend getting rid of fuel that is more than 2 or 3 months old, unless it has been treated with a stabilizer. 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.
5) The engines are preset by the manufacturer and are not adjustable except for idle and maximum RPMs.
6) Proper storage procedures are essential.
7) Engine manufacturers are silent on the use of synthetic oil.

CRATE DIMENSIONS & WEIGHTS

MODEL	LENGTH (in)	WIDTH (in)	HEIGHT (in)	WEIGHT (lb)
BX32S	40	31	48	421
BX52S	53	32	47	615
BX52R	64	50	49	955
BX62S	59	42	50	700
BX72R/I	88	58	63	1800
BX92S	58	44	57	1000
BX102R/I	91	64	72	1945
BX102RP/I	91	64	72	2150
BXH42	60	46	58	830
BXM32	54	31	51	575
BXM42	66	37	48	964
BXC32	45	25	42	323
BXMC32B	42	33	50	360
BXMC32S	42	33	50	380
BXMT3209	47	42	47	521
BXMT3213+	48	41	47	630
BXMT4224	84	66	47	1195
BXT4213+	66	57	49	1117
BXT4224+	66	57	49	1187
BXT6224	84	68	55	1836
BXT6238	84	68	55	1850
BXTR6438+	98	69	61	2441
FX35	52	47	29	355
FX66	31	43	59	644
FX85	31	43	59	644
FX85R	31	43	59	660
FX110	31	61	68	860
FX110R	31	61	68	880
FX140	31	61	70	985
FX140R	31	61	70	1005
FXP20	38	32	19	120
FXP30	59	41	31	340
GX620	76	31	48	540
GX720	90	31	54	770
GX920	90	31	71	1300
GX920XT	90	31	71	1400
LX5100	58	30	23	225
LX5200	65	49	30	477
LX5300	65	49	30	470
MX25	91	50	37	678
MX50G/P	123	48	41	875

CRATE DIMENSIONS & WEIGHTS (Continued)

MODEL	LENGTH (in)	WIDTH (in)	HEIGHT (in)	WEIGHT (in)
MX80G/P	137	54	44	1000
QC620	65	49	30	375
WE220	66	28	34	460
WE230	70	26	43	525
WP235	90	58	66	1653
WP265	96	58	66	2058
WP635	98	67	57	1813
WP835	98	67	57	1855
WP865	98	67	57	2133
WX310+	74	18	25	311
WX320+	82	43	32	540
WX330+	82	43	32	425
WX350+	74	18	25	239
WX360+	74	18	25	320
WX370+	74	30	34	430
WX410	74	18	34	400
WX430	83	43	33	683
WX440	74	18	25	375
WX450	84	43	32	585
WX460	74	18	25	450
WX470	74	30	34	425
WX510	74	30	34	299
WX515+	74	30	34	472
WX520+	74	30	34	478
WX520T	74	30	34	500
WX530+	74	30	34	520
WX540+	74	30	34	565
WX615	74	30	34	527
WX620+	74	30	34	531
WX620T	74	30	34	550
WX630+	74	31	39	540
WX640+	74	31	39	585
WX910+	74	31	39	510
WX910T	74	31	39	600
WX920	99	52	38	670
WX930	99	52	38	790
WX950	70	51	34	785
WX960	99	52	38	725
WX970	99	52	38	1175
WX980+	74	33	38	635

CRATE DIMENSIONS & WEIGHTS (Continued)

MODEL	LENGTH	WIDTH	HEIGHT	WEIGHT
LT30	125	57	70	915
LT30A	125	57	70	995
LT30H	125	57	70	970
LT30HA	125	57	70	1005
LT60*	198	68	60	1300
LT60H*	198	68	60	1400
LX95	97	48	62	780
LX95W	97	48	62	895
LX95PW	97	48	62	900
LX115	117	60	75	1075
LX115W	117	60	75	1200
LX95+ COMBINATIONS				
LT30	125	57	70	1695
LT30A	125	57	70	1775
LT30H	125	57	70	1750
LT30HA	125	57	70	1785
LX95W+ COMBINATIONS				
LT30	125	57	70	1810
LT30A	125	57	70	1890
LT30H	125	57	70	1865
LT30HA	125	57	70	1900
LX95W+ COMBINATIONS				
LT30	125	57	70	1815
LT30A	125	57	70	1895
LT30H	125	57	70	1890
LT30HA	125	57	70	1905
LX115+ COMBINATIONS				
LT60*	198	68	84	2375
LT60H*	198	68	84	2475
LX115W+ COMBINATIONS				
LT60*	198	68	93	2500
LT60H*	198	68	93	2600

+MODEL HAS VARIATIONS THAT DO NOT AFFECT WEIGHT

*** SHIPPED UNCRATED**

3-Point Hitch/Skidsteer Product Hydraulic & Electrical Requirements

Product/Model	FLOW (USgpm)	PRESSURE RELIEF SETTING (PSI)	Electrical
Backhoes			
GX620	5-7*	1850	N/A
GX720/920/XT	5-7*	2250	N/A
Chippers			
BXH42	20-30	N/A	N/A
BX42R	3-5	3000	N/A
BX52R	3-5	3000	N/A
BX52RI	3-5	3000	13V
BX62R	3-5	3000	N/A
BX72R	4-6	3000	N/A
BX72RI	4-6	3000	13V
BX102R BASE#	5-7	3000	N/A
BX102RI/RP/RPI#	8-10	3000	13V
Log Grapples & Booms			
ALL EXCEPT LX5300	1-2	3000	N/A
LX5300	1-2	3000	12V 3.5A
Splitters (MINIMUM)			
WX310	10	3000	N/A
WX320	13	3000	N/A
WX330	13	3000	N/A
WX350	13	3000	N/A
WX360	16	3000	N/A
WX370	10	3000	N/A
WX410	10	3000	N/A
WX430	13	3000	N/A
WX440	10	3000	N/A
WX450	13	3000	N/A
WX460	16	3000	N/A
WX470	10	3000	N/A
Wood Processor			
200 series	12-18	3000	N/A
Winches			
FX35	2-12	3000	N/A
Remote Control	1-2	3000	12V

***Please note that this is the MAXIMUM, it is not just a recommendation**

#BX102R and BX102RI work on closed-center hydraulics; BX102RP and BX102RPI do not and require C4550 PTO pump kit.

3-Point Hitch Product Pump Kit Specifications

Pump Kit	Pump Pressure @540rpm psi	Pump Flow @540rpm USgpm	Tank Capacity Litres	Recommended Oil	Oil Filter P/N
Backhoes					
PTO60	2300	5.5	9.5	HD Hydraulic	Z55301 Spin-on
PTO70	2300	5.5	12.5	HD Hydraulic	Z55301 Spin-on
PTO62	2300	5.5	9.5	HD Hydraulic	Z55201 In tank
PTO72	2300	5.5	12.5	HD Hydraulic	Z55201 In tank
Chippers					
C3540	3600	4.0	9.5	Dexron 3 or 4 ATF	Z55201 In tank
C4550	3600	4.5	9.5	Dexron 3 or 4 ATF	Z55201 In tank
Splitters					
W4180	2450	12.0	9.5	Dexron 3 or 4 ATF	Z55201 In tank
Wood Processors					
P300	1900	12.0	27.0	Dexron 3 or 4 ATF	Z55201 In tank

3-Point Hitch Products Quick-Hitch Compatibility

Model	Hitch Category	Category 1 QH	Category 2 QH	Top Link Pin Incl.	Bottom Pins Incl.
Chippers					
BX32S	**I**	**YES**	N/A	NO (3/4”)	7/8”
BX42S	**I**	**YES**	N/A	NO (3/4”)	7/8”
BX52S/R/I	**I**	**YES**	N/A	YES (3/4”)	7/8”
BX62S	**I**	**YES**	N/A	NO (3/4”)	7/8”
BX72R/I	**I**	**YES**	N/A	YES (3/4”)	7/8”
BX92S	**II**	N/A	**YES**	NO (1”)	1⅛”
BX102R	**II**	N/A	**NO**	YES (1”)	1⅛”
Chipper-Shredders					
BXM32	**I**	**YES**	N/A	NO (3/4”)	7/8”
BXM42	**I**	**YES**	N/A	NO (3/4”)	7/8”
Splitters					
WX310	**I**	**YES**	N/A	NO(3/4”)	7/8”
WX320	**I**	**YES**	N/A	NO(3/4”)	7/8”
WX330	**I**	**YES**	N/A	NO(3/4”)	7/8”
WX350	**I**	**YES**	N/A	NO(3/4”)	7/8”
WX360	**I**	**YES**	N/A	NO(3/4”)	7/8”
WX370	**I**	**YES**	N/A	NO(3/4”)	7/8”
WP235	**I/II**	**NO**	**NO**	1”	1⅛”
WP265	**I/II**	**NO**	**NO**	1”	1⅛”

3-Point Hitch Products Quick-Hitch Compatibility Continued

Model	Hitch Category	Category 1 QH	Category 2 QH	Top Link Pin Incl.	Bottom Pins Incl.
Winches					
FX35	**I**	**NO**	N/A	3/4"	7/8”
FX66	**I**	**NO**	N/A	3/4"	7/8”
FX85	**I**	**NO**	N/A	3/4"	7/8”
FX140	**II**	N/A	**NO**	1”	1⅛”
FXP20	**I**	**NO**	N/A	3/4”	7/8”
FXP30	**I/II**	**NO**	**NO**	1”	1⅛”
GRAPPLES					
LX5100	**I**	**NO**	N/A	1”	7/8”
Backhoes					
ALL	N/A	**NO**	**NO**	N/A	N/A

PTO Driven Product Shear Bolts

Model	Part Number (Single)	Part Number (5 Pack)	Size (mm)	Grade
Chippers				
BX32S	Z44901	Z19401	M8X1.25X45	8.8
BX32S	Z44902	N/A	M8X1.25X45	10.9
BX42S/R	Z44907	Z19407	M10X1.5X55	10.9
BX52S/R	Z44907	Z19407	M10X1.5X55	10.9
BX62S/R	Z44907	Z19407	M10X1.5X55	10.9
BX72R/I	Z44907	Z19407	M10X1.5X55	10.9
BX92S/R	Z44908	Z19408	M12X65	10.9
BX102R	Z44908	Z19408	M12X65	10.9
Chipper/Shredders				
BXM32	Z44907	Z19407	M10X1.5X55	10.9
BXM42	Z44907	Z19407	M10X1.5X55	10.9
Manure Spreaders				
All	N/A	N/A	N/A	N/A
Winches				
ALL	Z44902	N/A	M8X1.25X45	10.9

General Notes on 3-Point Hitch/Skidsteer Product

(A) EQUIPMENT MATCHING

1) The Horsepower recommendations refer to engine HP
2) The Horsepower recommendations MUST be adhered to.
3) 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.
4) The maximum PTO shaft joint angle is 45°

(B) QUICK-HITCHES

1) John Deere iMatch Quick-Hitch requires bushings available from John Deere dealers
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.

(C) PTO PRODUCT

1) The PTO driveline MUST be measured and cut (if required) as per the Owner's Manual. Failure to do so will result in damage to both the tractor and the implement.
2) PTO product ships with 3 spare shearbolts in manual tube.
3) The Tractor MUST be run at sufficient engine RPM to get at least 540RPM from the PTO

(D) HYDRAULICS

1) 3-Point hitch hydraulic products use ½" Pioneer Ball-style universal couplers. These may not work with the Poppet-style used one some tractors, although they will plug together. The Poppet-style is commonly used on larger Case, Ford, New Holland and John Deere tractors.
2) Skidsteer hydraulic products use ½" FlatFace couplers**.**
3) Some skidsteer models may have safety switches which will prevent the use of auxiliary hydraulics without an operator in the seat**.**
4) Closed Center (C) model splitters must be purchased for use on equipment with Closed Center hydraulics. The valves used on the splitters can NOT be converted.

Backhoe Cylinder Seal Kits

Model	Cylinder Size and Seal kit					
	Swing	Boom	Dipper	Bucket	Stabilizers	Other
GX500	2.0”X1.25” SLK-2012	2.0”X1.25” SLK-2012	1.75”X1.0” SLK-1710	1.75”X1.0” SLK-1710	2.0”X1.25” SLK-2012	N/A
GX600	2.0”X1.75” SLK-2012	2.5”X1.5” SLK-2515	2.0”X1.25” SLK-2012	2.0”X1.25” SLK-2012	2.0”X1.25” SLK-2012	N/A
GX700	2.5”X1.5 SLK-2515	2.5”X1.5” SLK-2515	2½”X1.5” SLK-2515	2.5”X1.5” SLK-2515	2.5”X1.5” SLK-2515	N/A
GX900	2.5”x1.5” SLK-2515	3.0”X1½” SLK-3015	2.5”X1.5” SLK-2515	2.5”X1½” SLK-2515	2.5”X1.5” SLK-2515	N/A
GX620	2.0”X1.25” SLK-2012	2.0”x1.25” SLK-2012	2.25”X1.25” SLK-2212	2.25”X1.25” SLK-2212	2.0”X1.25” SLK-2012	BT5300 Hyd. Thumb 2.25”X1.25” SLK-2212
GX720/920	2.5”X1.25” SLK-2515	3.0”X1.5” SLK-3015	3.0”X1.5” SLK-3015	2.5”X1.5” SLK-2515	2.5”X1.5” SLK-2515	
GX920XT	2.5”X1.5” SLK-2515	3.0”X1.5” SLK-3015	3.0”X1.5” SLK-3015	2.5”X1.5” SLK-2515	2.5”X1.5” SLK-2515	XT Cyl. 1.75”X1.0” SLK-1710
QC620	N/A	N/A	N/A	2.5”X1.5” SLK-2515	N/A	N/A

Main Valve Seals and Accessories

Spool kit Seals & Gaskets	Float Spool Seal	Swing Cushion O-ring	Closed-Center Plug	Power Beyond Sleeve
SKSD/6	XANE228061	OR17.18X1.78	AEK SD5	AE SAE8 SD5

Main Valve Cartridges

Relief	Load Check	Swing Cushion	Float Kit	Spring Return
5KIT05413	XKIT005000	XCAR211113	602001101	5V08105000

General Notes on Backhoes

(A) EQUIPMENT MATCHING

1) The Horsepower recommendations refer to engine HP
2) The 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 1set of remotes(1pressure line and 1 return line), or a PTO pump kit.
2) 7GPM is the MAXIMUM, it is not just a guideline recommendation. This 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 builds excessive heat in the system and can cause internal damage to the valve such as damaged seals, pressure relief valve, anti-shock valves, check valve and spools. It can also cause damage to the backhoe hoses, cylinders and weldments. Symptoms of this situation include excessively fast and jerky operation, hissing or squealing noises, the boom hitting against the frame, or the boom falling, even while trying to lift it. 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 problems such as excessive heat, slow or erratic operation (particularly in the swing), jerky movement, hissing or squealing noises, and an inability to operate 2 or more functions at the same time. 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, and specify the BFC501 for any tractor which operates above that range.
3) Backhoes come set up for operation on tractors with Open Center hydraulics. The AEKSD5 Closed Center Plug MUST be installed in the main valve for use on tractors with Closed Center hydraulics.
4) Controls come set up as ISO (Deere/Backhoe) style.
5) Boom circuit has a ‘float” function as a safety feature.

6) In some instances, the AE SAE8 SD5 Power Beyond Sleeve may be required for use with some power beyond kits supplied by tractor manufacturers.
7) Backhoes come standard with Pioneer Ball-style couplers. Skidsteer mount kits include ½" FlatFace couplers.
8) Some skidsteer models may have safety switches which will prevent the use of auxiliary hydraulics without an operator in the seat.
9) The 3 most common causes of operation problems on new tractor and skidsteer mounted backhoes are:
    a) Using an open-center model on a closed-center hydraulic system, or vice-versa
    b) Reversed pressure & return lines.
    c) Incompatible, dirty or defective couplers.
    d) Insufficient or excessive hydraulic pressure or flow from the power unit.

(C) SUBFRAMES & TIEBACK KITS

1) Bellymount subframes are NOT quick-connect, they require removal of lower 3-pt hitch arms.
2) 4-point subframes usually require wheel spacing on tractors equipped with Industrial or Turf Tires, either with spacers or by reversing the rim offset.
3) Top link MUST be used on all subframes.
4) In case of a difference in the horsepower rating between the brochure and the subframe list for a specific tractor, use the subframe rating because it includes an assessment of the actual tractor.
5) 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 .
6) 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
7) 3-pt hitch controls MUST NOT be operated with any backhoe attached.
8) Skidsteer loader/bucket controls MUST NOT be operated with a tieback kit attached.
9) GX600/700/900 model backhoes will mount to current subframes and 3-point hitch kits.

(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".
2) The BT53300 Hydraulic thumb MUSTordered 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.

Chipper and Chipper/Shredder Knives

Model	Rotor Knives Quantity/Type	Part Number	Shredder Knives	Part Number	Ledger Knife
3 Point Hitch/PTO Chippers					
BX32S	2, Offset, 2.5”	1056M303	N/A	N/A	1056M304
BX42S/R	4, Full, 6.0”	1011M103	N/A	N/A	1011M104
BX62S/R	4, Full, 8.5”	1012M203	N/A	N/A	1012M204
BX72R/I	4, Offset, 4.5”	1053M303	N/A	N/A	1012M204
BX92S/R	4, Offset, 6.5”	1019M903	N/A	N/A	1019M904
BX102R	4, Offset, 6.5”	1019M903	N/A	N/A	1019M904
3 Point Hitch/PTO Chipper/Shredders					
BXM32	2, Offset, 2.5”	1056M303	27	1056M108	1056M304
BXM42	2, Full, 6.5”	1011M103	30	1016M608	1011M104
Engine Powered Chippers					
BXC32	2, Offset, 2.5”	1056M303	N/A	N/A	1056M304
BXT4213	2,Full, 6.5”	1011M103	N/A	N/A	1011M104
BXT4224	2, Full, 6.5”	1011M103	N/A	N/A	1011M104
BXT6224	4, Offset, 4.5”	1053M303	N/A	N/A	1012M204
BXT6238	4, Offset, 4.5”	1053M303	N/A	N/A	1012M204
CR60/BXTR6438	4, Offset, 4.5”	1053M303	N/A	N/A	1012M204
Engine Powered Chipper/Shredders					
BXMC32S	2, Offset, 2.5”	1056M303	8	1056M108	1056M304
BXMC32B	2, Offset, 2.5”	1056M303	12	1056M108	1056M304
BXMT3209	2, Offset, 2.5”	1056M303	27	1056M108	1056M304
BXMT3213	2, Offset, 2.5”	1056M303	27	1056M108	1056M304
BXMT4224	2, Full, 6.5”	1011M103	30	1016M608	1011M104

CR60/BXTR6438 Specifications

Hydraulic Pump		Relief Valve Setting psi	Hydraulic Fluid Capacity L Dexron 3or 4 ATF	Speed Sensor Clearance in	Hydraulic Filters	
Pressure psi	Flow USgpm				Suction* In-tank	Return In-tank
3600	4.8	3000	30	5/32	Z55102	Z55201

NOTES:

*** BXTR6438 ONLY after serial number (N/A at this point)**

Fluid Coupler Specifications (if equipped)

SPECIFICATION	FLUID TYPE	CAPACITY AT LEVEL	FUSIBLE PLUG
K9	AW32	1.95L @ "X"	Z49303-1 (198°C)

Chipper Hydraulic Seal Kits

MODEL	PUMP	MOTOR (ALL)	"P" MODEL WINCH/LIFT VALVE SECTIONS				LIFT CYLINDER
			INLET	WORK	SIDE	BETWEEN	
BXH42	N/A	SK20-1*	N/A	N/A	N/A	N/A	N/A
BX-R (ALL)	N/A	SKMLHP-U/D'E	N/A	N/A	N/A	N/A	N/A
BX-RP/RPI	N/A	SKMLHP-U/D'E	20CK	20AK	20DK	20BK	SLK-1510AN
CR60/BXTR6438	SKPL20-S/D-49	SKMLHP-U/D'E	N/A	N/A	N/A	N/A	N/A

***Available from Metaris, not Wallenstein.**

Chipper and Chipper/Shredder Engine Service Parts

Model	Engine Make/Model	Air Filter (Inner/Outer)	Fuel Filter (Tank/Inline)	Oil Filter & Oil	Spark Plug OEM/NGK
BXT Series Chippers					
4213	Honda GX390 13HP	**17210-ZE3-505**	**16955-ZE1-000**	N/A **1.1L 10W30**	**98079-5685 BPR6ES**
4214SU	Subaru EX40 14HP	**20B-32610-H7**	**X64-20122-00**	N/A **1.2L 10W30**	**065-01401-50 BR6HS**
4224/6224	Honda GX690 24HP	**17210-Z6L-010**	**16910-Z6L-003**	**15400-PLM-A01 1.7L* 10W30**	**98079-5587G ZFR5F**
4228SU/6228SU	Subaru EH72 EFI 28HP	**263-32610-A1**	**263-65012-A3**	**248-65801-A3 1.72L* 10w30**	**X65-01407-30 BPR4EY**
6238	Kohler CH980 38HP	**25 08301-S 25 08304-S**	**24 05013-S**	**52050 02-S 2.7L* 20W50**	**62 13204-S BKR5ES**
Roller-Feed Trailer Series Commercial Chippers					
CR60/BXTR6438	Kohler CH980 38HP	**25 08301-S 25 08304-S**	**24 05013-S**	**52050 02-S 2.7L* 20W50**	**62 13204-S BKR5ES**
BXMC/BXMT Series Chipper/Shredders					
BXC32	Subaru SP210 7.0HP	**277-32603-08**	**X64-13600-10**	N/A **0.6L 10W30**	**065-01401-50 BR6HS**
BXMC32S/B	Subaru SP170/210 6.0/7.0HP	**277-32603-08**	**X64-13600-10**	N/A **0.6L 10W30**	**065-01401-50 BR6HS**
3209	Honda GX270 9HP	**17210-ZE2-515**	**16955-ZE1-000**	N/A **1.1L 10W30**	**98079-5685 BPR6ES**
3213	Honda GX390 13HP	**17210-ZE3-505**	**16955-ZE1-000**	N/A **1.1L 10W30**	**98079-5685 BPR6ES**
3214SU	Subaru EX40 14HP	**20B-32610-H7**	**X64-20122-00**	N/A **12L 10W30**	**065-01401-50 BR6HS**
4224	Honda GX690 24HP	**17210-Z6L-010**	**16910-Z6L-003**	**15400-PLM-A01 1.7L* 10W30**	**98079-5587G ZFR5F**

Chipper and Chipper/Shredder Engine Service Parts (Continued)

Model	Engine Make/Model	Air Filter (Inner/Outer	Fuel Filter (Tank/Inline)	Oil Filter	Spark Plug OEM/NGK
BXMC/BXMT Series Chipper/Shredders (continued)					
4228SU	Subaru EH72 EFI 28HP	**263-32610-A1**	**263-65012-A3**	**248-65801-A3 1.72L* 10w30**	**X65-01407-30 BPR4EY**

***With filter change**

General Notes on Chippers & Chipper-Shredders

(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 weigh and stress.
2) Rotor knife-to-stationary knife clearance is 1/16”- 1/32”. It should be checked and set with our ledger gauge or strip of sheet metal of the appropriate thickness by opening up the rotor housing.
3) Rotor Bearings: Please note that these bearings SHOULD NOT BE OVERGREASED. They are sealed ball bearings. Excessive greasing causes premature bearing failure. Too much grease pushes the seal out of the bearing, which causes loss of grease and attracts dirt into the bearing. It also prevents the balls from rolling properly, which causes flat spots in the balls and in the races. They should be greased with 1 or 2 shots about every 50 hours from a hand-operated grease gun only.
4) 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

(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) CENTRIFUGAL CLUTCHES & FLUID COUPLERS

1) 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 convertor 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 AW32 type transmission 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 at 198°C, which disengages the drive.
2) The C200 kit includes fluid coupler, taper bushing adapter for engine shaft, different muffler, and different belt guard, as well as necessary hardware.

3) The fluid coupler bolt should be torqued to 150 foot-pounds. The coupler requires an M20X2.5 bolt to remove.
4) Fluid coupler filler plugs and fusible plugs must have a liquid or paste thread sealant applied, such as Loctite 2422, and be torqued to 17 foot-pounds. Do not use Teflon tape.
5) The common causes of centrifugal clutch failure are:
    a) Running the engine at less than full RPM. This causes the clutch to run partially engaged, causing it to slip and burn. Operators will do this trying to reduce noise, vibration or fuel consumption, or thinking it increases engine life. Purchasing too small a chipper for your needs can also cause the engine to run at too low an RPM.
    b) Running the chipper with a seized or jammed rotor. This can be caused by shutting the chipper off and restarting it with wood jammed against the rotor, or by seized rotor bearings (see point 6). This can also be caused by allowing chips to pile up in the lower housing, which is caused by running the engine at less than full RPM (see point B5), or by shutting the engine off before the chipper has a chance to clear out any wood or chips still in it. Attempting to force feed the chipper or feed too much at once will also cause this. Dull knives and excessive knife clearances will imitate this symptom.

(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 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.
3) Hydraulic system uses Dexron 3 or 4 Automatic Transmission Fluid.
4) Check hydraulic fluid annually. It should be red. If it looks white, pink, foamy or dark/black, or has a burnt odour, replace it.
5) 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.
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 Pioneer Ball-style couplers.
8) BXH models come standard with 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 skidsteer models may have safety switches which will prevent the use of auxiliary hydraulics without an operator in the seat.

Generator & Welder-Generator Circuits

Model	120V Outlets # X Type	240V Outlets # X Type	120/240 Outlets # X Type	Main Breaker Amps	Popout Breaker # X Amps	Capacitor Size (mFZ)
EC Series						
EC2500	4X 5-20	N/A	N/A	N/A	1X 20	18
EC3000SU	4X 5-20	N/A	N/A	N/A	2X 20	18
EC3000	4X 5-20	N/A	N/A	N/A	2X 20	18
EC5000	2X 5-20 (Split)	N/A	1X L14-30	N/A	2X 20	20
EU Series						
EU5000/E	4X 5-20 1X L5-30	N/A	1X L14-30	20	2X 20	20
EU6000/E	4X 5-20 1X L5-30	N/A	1X L14-30	25	2X 20	25
EU7200E	2 X 5-20 1X L5-30	N/A	1X L14-30	30	2X 20	31.5
GF Series						
GF5000A EA	4X 5-20 GFCI 1X L5-30	N/A	1X L14-30	20	2X 20	20
GF6000A EA	4X 5-20 GFCI 1 X L5-30	N/A	1X L14-30	25	2X 20	25
GF7200EA	4X 5-20 GFCI 1X L5-30	N/A	1X L14-30	30	2X 20	31.5

Generator & Welder-Generator Circuits (Continued)

Model	120V Outlets X Type	240V Outlets # X Type	120/240 Outlets # X Type	Main Breaker Amps	Popout Breaker #X Amps	Capacitor Size (mFZ)
HUF Series						
HUF12000E	4X 5-20 1X L5-30	1X 6-50	1X 14-50 L14-30	50 Main 30 Sub	2X 20 (off 30A sub)	2x 31.5
HUF12000EA	4X 5-20 GFCI	1X 6-50	1X14-50 1X L14-30	50 Main 30 Sub	2X 20 (off 30A sub)	2x 31.5
DK Series Diesels						
DK5000E	4X 5-20 GFCI 1 X L5-30	N/A	1X L14-30	20	2X 20 1X 30	20
DK7200E	4X L5-20 1X L5-30	N/A	1X L14-30	30	2X 20 1X 30	31.5
WDC Series Welder/Generators						
WDC160	2X 5-20 GFCI	N/A	1X L14-30	N/A	2X 15	N/A
WDC190E	2X 5-20 GFCI	N/A	1X L14-30	N/A	2X 15	N/A
WDC190EA	4X 5-20 GFCI	N/A	1X L14-30	N/A	2X 15	N/A

NEMA Receptacle Codes

120V

5-20R = 20A Tslot & GFCI
L5-30R = 30A Locking

240V

6-50R = 50A Welder

120/240V

14-50R = 50A Stove
L14-30R = 30A Locking

Generator and Welder/Generator Engine Service Parts

Model	Engine Make/Model	Air Filter (Inner/Outer)	Fuel Filter (Tank/Inline)	Oil Filter	Spark Plug OEM/NGK
EC Series Generators					
2500	Honda GC160 5HP	**17211-ZL8-023**	**16955-ZE1-000 ------**	**N/A 0.58L 10W30**	**98079-56846 BPR6ES**
2600	Honda GX160 5HP	**17211-ZE1-000**	**16955-ZE1-000 ------**	**N/A 0.6L 10W30**	**98079-56846 BPR6ES**
3000	Honda GX160 5.5HP	**17211-ZE1-000**	**16955-ZE1-000 ------**	**N/A 0.6L 10W30**	**98079-56846 BPR6ES**
5000/5000E	Honda GX270 9HP	**17210-ZE2-515**	**16955-ZE1-000 ------**	**N/A 1.1L 10W30**	**98079-56846 BPR6ES**
EU Series Generators					
5000/5000E	Honda GX270 9HP	**17210-ZE2-515**	**16955-ZE1-000 Z93302**	**N/A 1.1L 10W30**	**98079-56846 BPR6ES**
6000/6000E	Honda GX340 11HP	**17210-ZE3-505**	**16955-ZE1-000 Z93302**	**N/A 1.1L 10W30**	**98079-56846 BPR6ES**
7200E	Honda GX390 13HP	**17210-ZE3-505**	**16955-ZE1-000 Z93302**	**N/A 1.1L 10W30**	**98079-568846 BPR6ES**
GF Series Generators					
5000A/5000EA	Honda GX270 9HP	**17210-ZE2-515**	**16955-ZE1-000 Z93302**	**N/A 1.1L 10W30**	**98079-56846 BPR6ES**
6000A/6000EA	Honda GX340 11 HP	**17210-ZE3-505**	**16955-ZE1-000 Z93302**	**N/A 1.1L 10W30**	**98079-56846 BPR6ES**
7200EA	Honda GX390 13HP	**17210-ZE3-505**	**16955-ZE1-000 Z93302**	**N/A 1.1L 10W30**	**98079-56846 BPR6ES**

Generator and Welder/Generator Engine Service Parts (Continued)

Model	Engine Make/Model	Air Filter (Inner/Outer)	Fuel Filter (Tank/Inline)	Oil Filter & Oil	Spark Plug OEM/NGK
HUF Series Generators					
12000/12000EA	Honda GX620 20HP	**17210-ZJ1-841 17210-ZJ1-840**	**Z93302 16910-ZE8-015**	**15400-PLM-A01 1.7L* 10W30**	**98079-56846 BPR6ES**
12000/12000EA	Honda GX630 20HP	**17210-Z6L-900 17218-Z6M-000**	**16910-Z6L-003**	**15400-PLM-A01 1.7L* 10W30**	**98079-5587 ZFR5F**
HD Series Diesel Generators					
5000E	Hatz IB30 6.8 HP	**50426000 -----**	**----- 50478800**	**Cleanable Reusable**	**N/A**
7300E	Hatz 1B40 9. 9HP	**50426000 -----**	**----- 50478800**	**Cleanable Reusable**	**N/A**
DK Series Diesel Generators					
5000E	Kohler KD350	**ED0021753060-S**	**---- ED003730960-S**	**ED0021751550-S**	**N/A**
7300E	Kubota OC95-E3	**11420-11180**	**---- 11460-43012**	**14911-32110**	**N/A**
WDC Series Welder/Generators					
160	Honda GX340 11HP	**20B-32610-H7 -----**	**16955-ZE1-000 ------**	**N/A 1.1L 10W30**	**98079-56846 BPR6ES**
190E/190EA	Honda GX390 13HP	**17210-ZE3-505 -----**	**16955-ZE1-000 ------**	**N/A 1.1L 10W30**	**98079-56846 BPR6ES**

***With filter change**

Generator Run Time, Noise Ratings, Total Harmonic Distortion

MODEL	RUN TIME (HOURS)		Db RATING dB (A)	THD %
	HALF LOAD	FULL LOAD		
EC Series				
EC2500	3	2.5	70	<7.5
EC3000SU	3.5	2.75	70	<5
EC5000	4	3	72	<6
EU Series				
EU5000/E	12	7	72	<6
EU6000/E	12	7	76	<6
EU7200E	11.5	6.5	77	<6
GF Series				
GF5000A/EA	12	7	72	<6
GF6000A/EA	12	7	76	<6
GF7200A/EA	11.5	6.5	77	<6
HUF Series				
HUF12000E/EA	10	7	78	<4
DK Diesel Series				
DK5000E	22	16	74	<6
DK7300E	14	9	77	<6
WDC Series Welder-Generators				
WDC160	4	3	76	N/A
WDC190E	3.5	2.75	77	N/A
WDC190EA	12	7	77	N/A

General Notes on Generators

(A) ALTERNATORS

1) Generators are 1 Phase, 60Hz, Sine Wave, Copper Wound, Brushless.
2) WDC welder-generators use brushes, do not use capacitors.
3) Voltage regulation is by capacitor
4) All neutrals and grounds are bonded to frame

(B) ENGINES

1) Engine must be properly tuned and run at full throttle (3600 RPM). Throttles are locked in this position.
2) Diesel generators MUST be run at a minimum of half-load constantly. Otherwise, problems develop with poor running and excessive smoking (Wet Stacking).

(C) INSTALLATION & USE

1) Please determine wattage requirements of everything the generator will be required to run together at any time before purchasing.
2) Generators are not Inverter or AVR type. Therefore, minor output fluctuations in Frequency and Voltage make them unsuitable for sensitive electronics.
3) Diesel generators are not suitable for use as home backup, due to low/variable load demands (see B2).
4) Consult a licensed electrician for proper hookup when using as a home backup.
5) Bonded neutrals and grounds should only be used with transfer switches which switch neutral (3-pole) when used as home backup.
6) 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 twistlock outlet. However, 240V is not available when Full Power is selected.

Grapple and Logboom Cylinder Seal Kits

Model	Cylinder Size and Seal kit				
	Grapple	Boom	Dipper	Stabilizer	Opt. Bucket
LX5000 series	2.5”X1.5” **SLK-2515**	N/A	N/A	N/A	N/A
LX100	2.5”X1.5” **SLK-2515**	3.0”X1.5” **SLK-3015**	2.5”X1.5” **SLK-2515**	2.0”X1.25” **SLK-2012**	N/A
LX95	2.0”X1.25” **SLK-2012**	2.5”X1.5” **SLK-2515**	2.5”X1.25” **SLK-2512**	2.0”X1.25” **SLK-2012**	2.25”X1.25” **SLK-2212**
LX115	2.5”X1.5” **SLK-2515**	3.0”X1.5” **SLK-3015**	2.5”X1.25” **SLK-2512**	2.25”X1.25” **SLK-2212**	2.25”X1.25” **SLK-2212**

Logboom Powerpack Specifications

Model	Pump		Tank Capacity L Dexron 3 or 4 ATF	Oil Filter
	Pressure psi	Flow USgpm		
L501	3750	2	13.0	Z55201 In tank
L401	3750	2	17.0	Z55301 Spin-On
L601	3500	5	17.0	Z55301 Spin-On

Logboom Powerpack Engine Service Parts

Model	Engine Make/Model	Air Filter (Inner/Outer)	Fuel Filter (Tank/Inline)	Oil Filter & Oil	Spark Plug OEM/NGK
L501	Honda GX160 5.0HP	**17211-ZE1-000**	**16955-ZE1-000 ------**	N/A **0.6L 10W30**	**98079-56846 BPR6ES**
L401	Subaru SP210 7.0HP	**277-32603-08**	**X64-13600-10**	N/A **0.6L 10W30**	**065-01401-50 BR6HS**
L601	Subaru EX270 9.0HP	**279-32603-08**	**050-51200-20 ------**	N/A **1.2L 10W30**	**065-01401-50 BR6HS**

Grapple and Logboom Hydraulic Seal kits

Valves					Motors	Rotator	Power Pack Pump
Main	**S20 Side**	**S20 Inlet**	**S20 Work**	**S20 Btwn**			
SKSD5/7	20DK	20CK	20CK	20BK	SKMLHP-U/D'E	RKCR300	N/A

General Notes on Grapples and Logbooms

1) Engine must be properly tuned and run at full throttle
2) Use Dexron 3 or 4 Automatic Transmission Fluid
3) Check hydraulic fluid annually. It should be red. If it looks white, pink, foamy or dark/black, or has a burnt odour, replace it
4) Timber Talon stabilizers are part of the boom base, to allow custom mounting.
5) Tractor and skidsteer models require hydraulic flow from the auxiliaries of the power unit, via 1set of remotes (1pressure line and 1 return line).
6) L400 3-pint hitch mount includes Pioneer Ball-style couplers and a flow divider.
7) LX5100 includes Pioneer Ball-style couplers and requires 1-2 GPM hydraulic flow from the tractor
8) LX5100 rotation cannot be locked in position
9) LX5200 includes FlatFace couplers and requires 1-2 GPM hydraulic flow from the skidsteer
10) LX5200 rotation can be lock in 3 different positions.
11) LX5300 includes FlatFace couplers and requires 1-2 GPM hydraulic flow as well as 12V/3.5A electrical power from the skidsteer
12) For the Log Trailers, Left & Right and Front & Rear in the parts diagrams are determined by the operator at the Logboom controls, so the hitch is considered the rear.

Splitter Oil Filter Cross Reference

5hp-6.5hp Wood Splitters					
Old Part #	**New Part #**	**Fram #**	**Fleetguard #**	**Baldwin #**	**Cresen #**
W1027	Z55301	P-1654	HF 6057	BT-839	F103
9hp Wood Splitters					
W1062	Z55303	SPE-50-25	HF 6125	BT-387	F5252
Wood Processors					
Model		**Suction (In-tank)**		**Return (Spin-On)**	
WP630/635//820		N/A		Z55303	
WP830/835/860/865		Z55102		Z55303	

Splitter Pump Specifications

Pump	Type	Stage1		Stage 2		Relief Setting (psi)	Seal Kit
		Flow USgpm	Pressure psi	Flow USgpm	Pressure (psi)		
Z53201	2 Stage	8	500	3	2500	3000	N/A
Z53204	2 Stage	8	600	3	2500	3000	N/A
Z53205	2 Stage	12	650	4	2500	3000	2992024
Z53206	2 Stage	15	650	7	2500	3000	1300340

Splitter Wedge Heights (inch)

WE200s ALL	WX300s		WX400s		WX500s ALL	WX600s ALL	WX900s ALL
	310/350/ 370	320/330 360	410/440/ 470	430/450/ 460			
9	9	10	9	10	9	10	10

Splitter Cylinder Seal Kits and Fluid Capacities

Model	Cylinder Size Bore X Rod Inch	Seal Kit Part Number	FLUID CAPACITY Litres Dexron 3 or 4 ATF
WE200 series			
ALL	**4.0X1.5**	**SLK-4015**	11
300 Series			
WX310/350/370	**4.0X1.5**	**SLK-4015**	N/A
WX320/330	**4.5X2.5**	**SLK-4525**	N/A
WX360	**5.0X2.5**	**SLK-5025**	N/A
400 Series			
WX410/440/470	**4.0X1.5**	**SLK-4015**	N/A
WX430/450	**4.5X2.5**	**SLK-4525**	N/A
WX460	**5.0X2.5**	**SLK-5025**	N/A
WX500 Series			
WX510/515/520	**4.0X1.5**	**SLK-4015**	11
WX540	**4.0X1.5**	**SLK-4015**	13
600 Series			
WX615/620	**4.5X2.5**	**SLK-4525**	11
WX630/SU/640	**4.5X2.5**	**SLK-4525**	13
900 Series			
WX910	**4.5X2.5**	**SLK-4525**	16
WX950/960/970	**4.5X2.5**	**SLK-4525**	20
WX980	**5.0X2.5**	**SLK-5025**	17
Log Lifter Cylinder	**3.5X1.5**	**SLK-3515**	N/A
1300 Series			
WX1320	**4.5X2.5**	**SLK-4526**	24
WP Series			
ALL	**4.5X2.5**	**SLK-4525**	30

Splitter Engine Service Parts

Model	Engine Make/Model	Air Filter (Inner/Outer)	Fuel Filter (Tank/Inline)	Oil Filter	Spark Plug (OEM/NGK)
WE Series					
220/230	Subaru EA190V 5.8HP	**17151Z03011000**	**16652Z03011000** ------	N/A **0.6L 10W30**	**30010Z02012000 BPR7HS**
WX Series					
510/515/530	Honda GC160 5HP	**17211-ZL8-023**	**16955-ZE1-000** ------	N/A **0.6L 10W30**	**98079-56846 BPR6ES**
520/T/540	Honda GX160 5.5HP	**17210-ZE1-517**	**16955-ZE1-000** ------	N/A **0.6L 10W30**	**98079-56846 BPR6ES**
615/630	Honda GC190 6HP	**17211-ZL8-023**	**16952-ZA8-800** ------	N/A **0.6L 10W30**	**98079-56846 BPR6ES**
630SU	Subaru EX170 5.7HP	**277-32603-08**	**X64-13600-10** -----	N/A **0.6L 10W30**	**065-01401-50 BPR6HS**
620/T/640	Honda GX200 6.5HP	**17210-ZE1-517**	**16955-ZE1-000** ------	N/A **0.6L 10W30**	**98079-56846 BPR6ES**
All 900 Series	Honda GX270 9HP	**17210-ZE2-515**	**16955-ZE1-000** ------	N/A **1.1L 10W30**	**98079-56846 BPR6ES**
1320	Honda GX390 13HP	**17210-ZE3-505**	**16955-ZE1-000** ------	N/A **1.1L 10W30**	**98079-56846 BPR6ES**
WP Series					
630/635//820	Subaru EX270 9HP	**279-32603-08**	**050-51200-20** ------	N/A **1.2L 10W30**	**065-01401-50 BR6HS**
830/835/860/865	Subaru EX 400 14HP	**20B-32611-H8**	**X64-20122-00** ------	N/A **1.2L 10W30**	**065-01401-50 BR6HS**

General Notes on Splitters

(A) GENERAL

1) Assembly hardware is shipped in manual tube.
2) WE series splitters are NOT recommended for commercial use.

(B) 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

(C) HYDRAULICS

1) Use Dexron 3 or 4 Automatic Transmission Fluid
2) Check hydraulic fluid annually. It should be red. If it looks white, pink, foamy or dark/black, or has a burnt odour, replace it
3) Tractor and skidsteer models operated by the diverter valve require constant hydraulic flow from the auxiliaries of the power unit, via 1set of remotes (1pressure line and 1 return line).
4) Inverted skidsteer models, which do not have a valve, do not require constant flow since they are operated from the skidsteer seat.
5) WX300 series splitters come standard with Pioneer Ball-style couplers
6) The "C" in the model number of the WX300s designates closed-center hydraulic system.
7) WP200 series is fo ruse on tractors with Op-Center hydraulics. The P400
8) WX400 series splitters come standard with ½" FlatFace couplers**.**
9) Some skidsteer models may have safety switches which will prevent the use of auxiliary hydraulics without an operator in the seat.
10) The return kickout on the Brand splitter valve (WX and WP 200 series) is adjustable via the black socket-head screw with locknut sticking out of the silver cap on the end of the valve opposite the control lever. Turning the screw in (CW) reduces the pressure required to release the detent. Turning the screw out (CCW) increases the pressure required.
11) The return kickout on the Prince winch and splitter valve (WP series) is adjustable via the black hex bolt with locknut sticking out of the top of the valve. Turning the bolt in (CW) increses the pressure required to release the detent. Turning the screw out (CCW) reduces the pressure required.
12) The common causes of hydraulic fluid pushing out of the filler cap are operating the unit on a sidehill with that side low, or overfilling the hydraulic tank.
13) The common causes of operation problems on new tractor and skidsteer mounted splitters are:
    a) Using an open-center model on a closed-center hydraulic system, or vice-versa
    b) Reversed pressure & return lines.
    c) Incompatible, dirty or defective couplers.
    d) Insufficient hydraulic pressure or flow from the power unit.

(D) ACCESSORIES

1) The P200 Pivoting Chainsaw Holder kit includes the mounting channel which must be welded on to older WP models. The mounting channel is on new models.
2) The P200 pivoting chainsaw holder requires chainsaws with 2 bar studs. A minimum bar length of 22" is recommended.
3) P200 operational problems can be caused by using a chainsaw with a worn bar or a chain that is dull or unevenly sharpened.

General Notes on Spreaders

1) Listed capacities are heaped
2) We do not have horsepower recommendations for the spreaders. Please take into account the towing capacity of the tractor or ATV and the loaded weigh of the spreader.
3) There is no cleanout function on the spreaders. The apron chain and the beater bar cannot be run separately.
4) 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 fed to the beater bar.
5) The End Gate option for the MX25/50/80 is not hydraulically actuated.

General Notes on Winches

1) Horsepower recommendations MUST be adhered to.
2) Pulling too lightly on the clutch rope will cause clutch slipping and glazing. The harder the operator pulls on the clutch rope, the harder the winch will pull.
3) Exercise caution when lubricating the drive chain or other parts. Do not allow lubricant on the clutch face or pads.
4) 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.
5) FX-R models require 1-2GPM hydraulic flow and 12V electric power from the tractor.
6) FX-R remote transmitter uses 2 ”AAA” size batteries.
7) FX-R models have no way of engaging the clutch without the remote transmitter.
8) Never reel the cable in without a load on. It will cause the cable to bunch up and kink on the drum.
9) Longer or larger cables than supplied are not recommended. The drums are sized to meet Health & Safety Laws regarding percentage of drum used.
10) Proper adjustment of the clutch is critical.