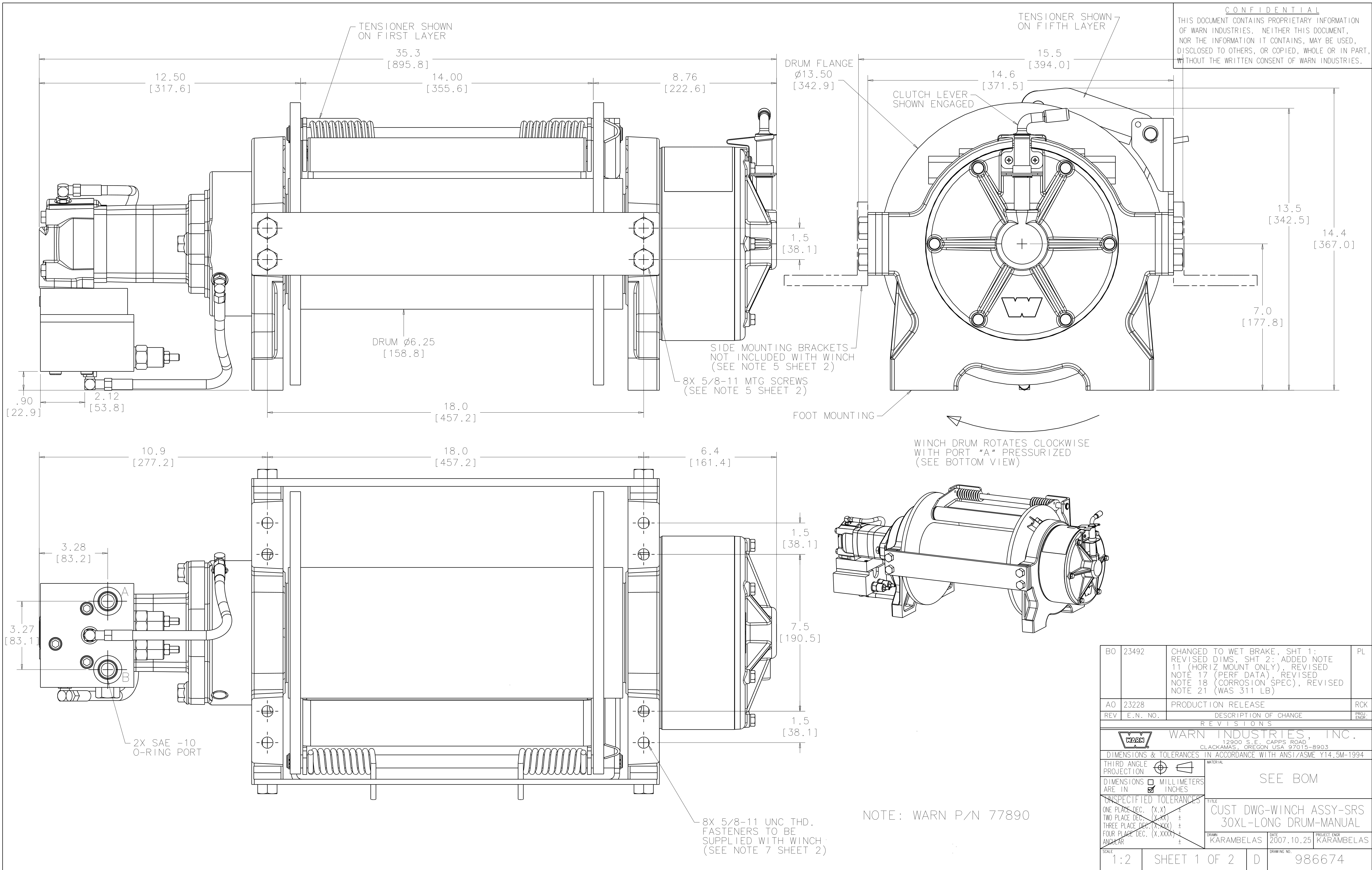


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BO	23492	CHANGED TO WET BRAKE, SHT 1: REVISED DIMS, SHT 2: ADDED NOTE 11 (HORIZ MOUNT ONLY), REVISED NOTE 17 (PERF DATA), REVISED NOTE 18 (CORROSION SPEC), REVISED NOTE 21 (WAS 311 LB)	PL
AO	23228	PRODUCTION RELEASE	RCK
REV	E.N. NO.	DESCRIPTION OF CHANGE	PROJ. ENGR.
REVISIONS			
WARN INDUSTRIES, INC.			
12900 S.E. CAPPS ROAD, CLACKAMAS, OREGON USA 97015-8903			
DIMENSIONS & TOLERANCES IN ACCORDANCE WITH ANSI/ASME Y14.5M-1994			
THIRD ANGLE PROJECTION		MATERIAL	SEE BOM
DIMENSIONS ARE IN	<input checked="" type="checkbox"/> MILLIMETERS <input type="checkbox"/> INCHES	TITLE	CUST DWG-WINCH ASSY-SRS 30XL-LONG DRUM-MANUAL
UNSPECIFIED TOLERANCES	ONE PLACE DEC. (X.X) ± TWO PLACE DEC. (X.XX) ± THREE PLACE DEC. (X.XXX) ± FOUR PLACE DEC. (X.XXXX) ±	DATE	2007.10.25
SCALE	1:2	DRAWING NO.	986674
SHEET 1 OF 2		D	KARAMBELAS

NOTE: WARN P/N 77890

INSTALLATION NOTES:

1. WINCH MUST BE CONTROLLED BY A 3-POSITION, 4-WAY, SPRING RETURN OPEN CENTER CONTROL VALVE TO ENSURE PROPER BRAKE SYSTEM OPERATION (SEE HYDRAULIC SCHEMATIC).
2. HYDRAULIC SYSTEM BACK PRESSURE (RETURN LINE PRESSURE) MUST NOT EXCEED 100 PSI. USE OF THE INCORRECT CONTROL VALVE OR PLUMBING MAY CAUSE FAILURE OF THE BRAKE SYSTEM.
3. MANUAL CLUTCH OPERATION: CLUTCH SHOWN IN ENGAGED POSITION ON SHEET 1. DEPRESS DETENT SPRING AND ROTATE CLUTCH LEVER 180° TO FREESPOOL POSITION. LEVER ROTATES IN EITHER DIRECTION.
4. WIRE ROPE MAY BE ATTACHED AND WOUND IN EITHER DIRECTION SUBJECT TO MOUNTING METHOD (SEE NOTES 5, 6, 7, AND 8).
5. WIRE ROPE MAY BE WOUND OFF THE TOP OR BOTTOM OF THE DRUM IN ANY PULL DIRECTION WHEN USING SIDE MOUNTING. SIDE MOUNTING BRACKETS ARE NOT SUPPLIED WITH WINCH. BRACKETS TO BE 4 IN (100 MM) X 4 IN (100MM) X 1/2 IN (12 MM) MINIMUM THICKNESS STEEL ANGLE. TIE PLATE(S) AND TENSIONER BRACKET TO REMAIN IN PLACE WHEN USING SIDE MOUNTING. SIDE MOUNTING SCREWS WILL ACCOMODATE UP TO 1/2 IN (12 MM) ADDITIONAL MOUNTING BRACKETS. THICKER MOUNTING BRACKETS WILL REQUIRE LONGER SCREWS.
6. WIRE ROPE MAY BE WOUND OFF THE BOTTOM OF THE DRUM ONLY WHEN USING FOOT MOUNTINGS. PULL DIRECTION TO BE PARALLEL TO MOUNTING PLATE OR TOWARDS MOUNTING PLATE WHEN USING FOOT MOUNTINGS. DO NOT ORIENT PULL DIRECTION AWAY FROM MOUNTING PLATE WHEN USING FOOT MOUNTINGS. FOOT MOUNTING TO BE 1/2 IN (12 MM) MINIMUM THICKNESS STEEL PLATE. FOOT MOUNTING HARDWARE TO BE SUPPLIED WITH WINCH.
7. ALL MOUNTING HARDWARE TO BE SAE GRADE 8. TIGHTENING TORQUE: 159 LB-FT (216 N-M)
8. WIRE ROPE DIAMETER: 5/8 IN (16 MM) MAXIMUM, 41300 LB (18733 KGF) MINIMUM BREAKING STRENGTH.
9. TENSIONER ASSEMBLY MAY BE MOUNTED IN 4 POSITIONS.
10. WINCH IS NOT TO BE USED FOR HOISTING APPLICATIONS OR MOVEMENT OF PERSONS.
11. WINCH IS TO BE MOUNTED IN HORIZONTAL DRUM ORIENTATION ONLY. CONSULT WARN ENGINEERING IF VERTICAL MOUNTING IS REQUIRED.

HYDRAULIC WINCH PERFORMANCE DATA:

12. COMPLIES WITH SAE J706 AUGUST 2003, SECTION 4.0 AFFIXED TO THE WINCH GEARBOX
13. COMPLIES WITH SAE J706 AUGUST 2003, SECTION 5.0

5.1 INTERMITTENT DUTY CYCLE RATING:

	1000 FT AT 12 FT/MIN (305 M AT 3.7 M/MIN)
5.2 STARTING INPUT TORQUE:	N/A*
5.3 RUNNING INPUT TORQUE:	N/A*
5.4 RATED INPUT SPEED:	358 RPM MAX
5.5 MAXIMUM PERMISSIBLE NUMBER OF LAYERS:	5
5.6 DRUM STORAGE CAPACITY (K FACTOR = 0.89):	245 FT (75 M)
5.7 RATED LINE PULL BY LAYER:	LBS (KGF) (KN)
LAYER 1	30,000 (13608) (133.4)
LAYER 2	25,385 (11514) (112.9)
LAYER 3	22,000 (9979) (97.9)
LAYER 4	19,412 (8805) (86.3)
LAYER 5	17,368 (7878) (77.3)

5.8 RATED LINE SPEED:

AT 20 GPM (75.7 L/MIN):	18 FT/MIN (5.4 M/MIN)
AT 15 GPM (56.8 L/MIN):	13 FT/MIN (4.0 M/MIN)

5.9 MAXIMUM INPUT PRESSURE: 3000 PSI (200.0 BAR)
 MAXIMUM INPUT FLOW RATE: 20 GPM (75.7 L/MIN)

14. MANUFACTURERS TEST PROCEDURES PER SAE J706 AUGUST 2003, SECTION 6.0
15. MOUNTING METHOD PER SAE J706 AUGUST 2003, SECTION 8.0
16. COMPLIES WITH CE MACHINERY DIRECTIVE 98/37/EC. CE COMPLIANCE PER DECLARATION OF CONFORMITY-WARN DOCUMENT NUMBER 986616.

17. HYDRAULIC PRESSURE DROP (FIRST LAYER) 15 GPM (56.8 L/MIN) 20 GPM (75.7 L/MIN)

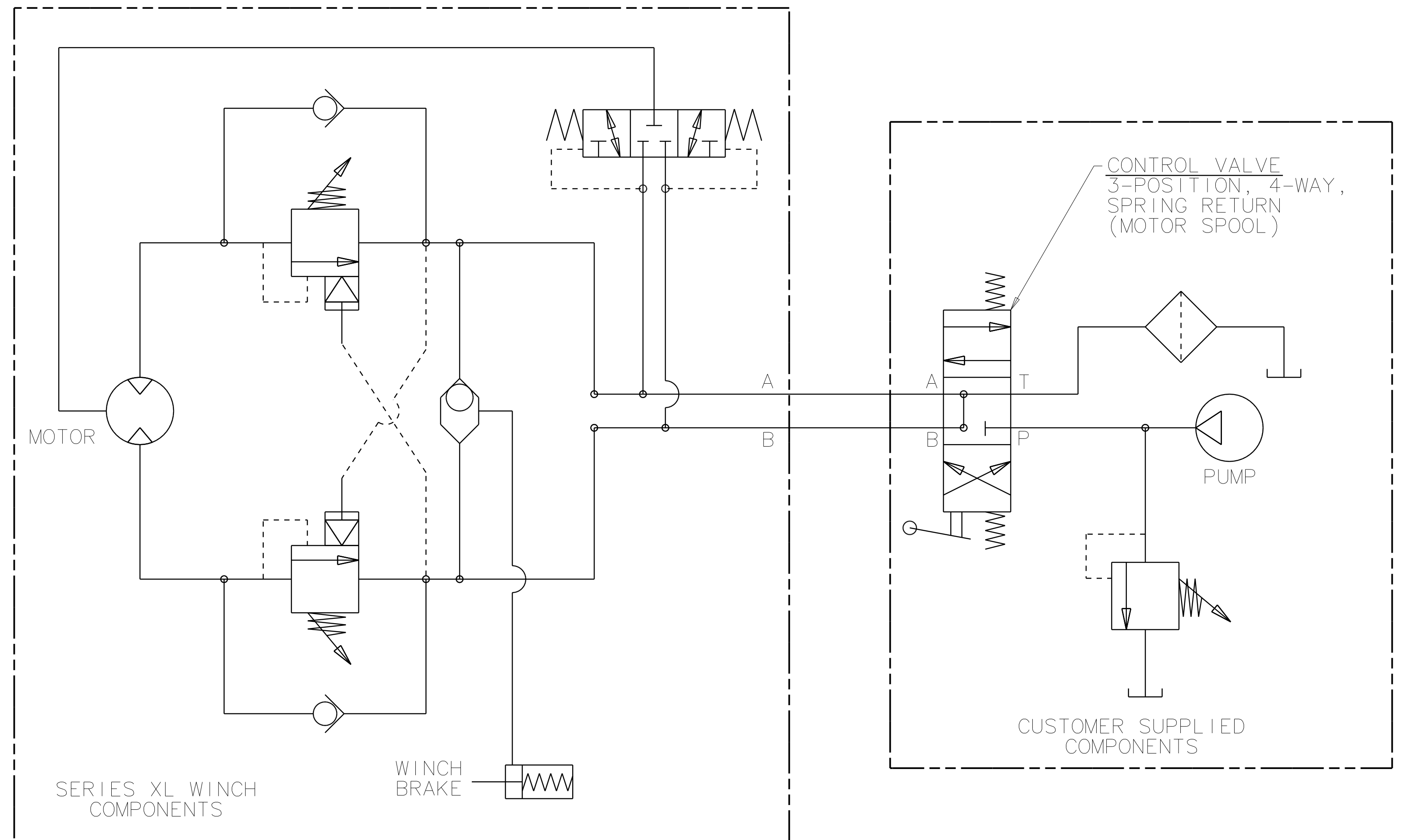
LINE PULL	LB	(KGF)	(KN)	PSI (BAR)	PSI (BAR)
0	0	(0)	(0)	1150 (79.3)	1400 (96.5)
7500	(3402)	(33.4)		1250 (86.2)	1700 (117.2)
15000	(6804)	(66.8)		1700 (117.2)	2150 (148.2)
22500	(10205)	(100.1)		2180 (150.3)	2600 (179.3)
30000	(13608)	(133.4)		2650 (182.7)	3000 (200.0)

18. CORROSION PROTECTION PER ASTM B117-97 (240 HOURS), INSPECTED PER ASTM D1654-84 TABLE 2, MINIMUM RATING 6 ON ALL PARTS EXCEPT DRUM, MOTOR AND BRAKE.
19. GEAR RATIO: 36.0:1
20. MOTOR SIZE: 11.9 CU IN/REV (195.0 CC/REV)
21. APPROX WEIGHT: 339 LB (154 KG) WITHOUT WIRE ROPE.

* WINCH TO BE FURNISHED COMPLETE WITH EATON HYDRAULIC MOTOR.
 ** MAXIMUM RECOMMENDED OPERATING PRESSURE: 3000 PSI (200.0 BAR)

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HYDRAULIC SYSTEM SCHEMATIC SERIES XL WINCHES



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THIRD ANGLE PROJECTION		MATERIAL	
DIMENSIONS ARE IN		SEE BOM	
UNSPECIFIED TOLERANCES		TITLE	
ONE PLACE DEC. (X.X)		CUST DWG-WINCH ASSY-SRS	
TWO PLACE DEC. (X.XX)		30XL-LONG DRUM-MANUAL	
THREE PLACE DEC. (X.XXX)		DRAWN	
FOUR PLACE DEC. (X.XXXX)		KARAMBELAS	
ANCHOR		DATE	
SCALE		2007.10.25	
1:2		PROJECT ENGR	
SHEET 2 OF 2		KARAMBELAS	
D		DRAWING NO.	
		986674	

NOTE: WARN P/N 77890