

FSU2A150 TENSION TEST STAND

OPERATIONS AND MAINTENANCE MANUAL

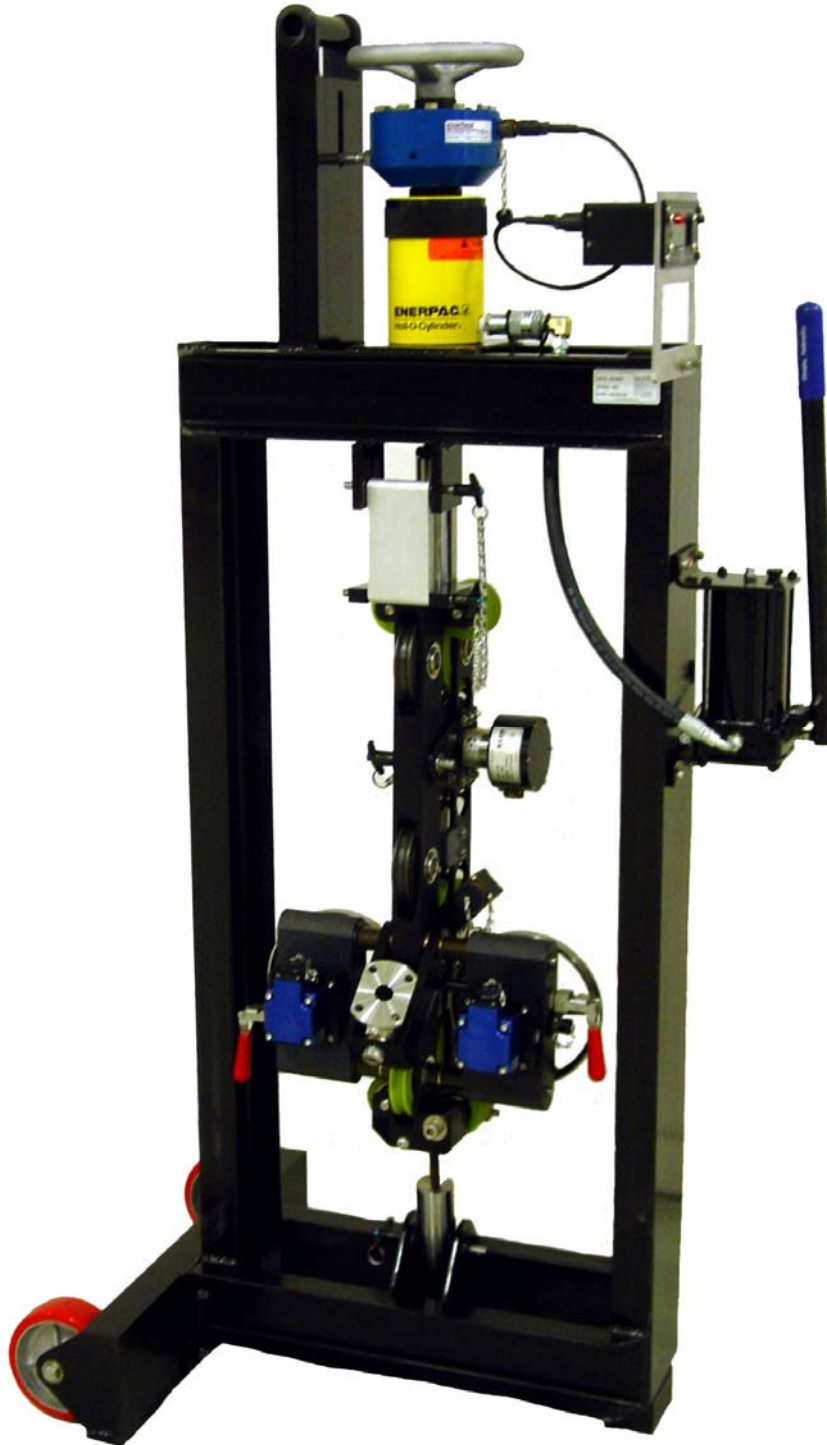


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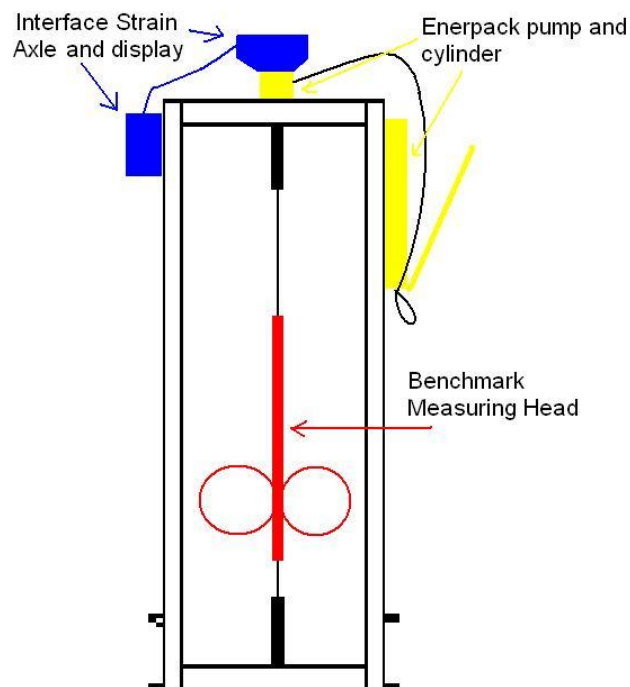
Manual Revision Log

Current Revision	A	AUG 2009
		Initial Release

1.0 GENERAL INFORMATION

1.1 INTENDED USE OF EQUIPMENT

This device is designed to verify the tension reading of a BenchMark AM3K or AM5K measuring head. A short piece of actual logging cable is installed into the stand. Rope sockets are installed on each end of the cable to secure it to the blocks at the bottom and top of the stand. The measuring head is then installed over the cable and the cable is tightened using a hydraulic hand pump. An actual load of up-to 12,500 pounds (5670 kg) can be applied to the head. The load applied to the cable is measured by the round load cell on the top of the stand and displayed on the tension display panel mounted on the front of the stand. The measuring head is then connected to a computer system or a secondary tension display panel (ALS8A101). The tension values displayed on the computer or secondary display should closely match the actual applied tension. Any differences will reflect problems that need to be corrected in the measuring head such as worn bearings, load pin out of tolerance, worn wheels, etc.



1.2 SPECIFICATIONS

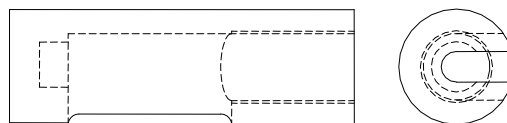
WEIGHT:	295 lbs	134 kg
HEIGHT:	68.4"	1.74 m
WIDTH:	39.2"	1 m
DEPTH:	24"	.61 m
RELIEF VALVE SET:	15,000 lbs	5670 kg

1.3 INSTRUCTIONS FOR USE

1. Cut a piece of wireline cable to 38.5" (.9778 m) and rehead with rope sockets. For testing an AM5K, .474 Slammer is recommend. For testing the AM3K, 5/16" cable is recommended.



2. Connect the ALS8A010-2 Load Cell cable to the ALS8A100 tension display panel.
3. Using the hand wheel on top of the frame to pull the slack from the cable.
4. Set the ALS8A100 tension display panel to match the load cell (refer to section 1.4)
5. With the cable relaxed, zero the tension by pressing the Zero button on the ALS8A100 tension display panel.
6. Install the wireline cable in the stand by inserting the rope sockets into the retainers at the top and bottom of the frame.

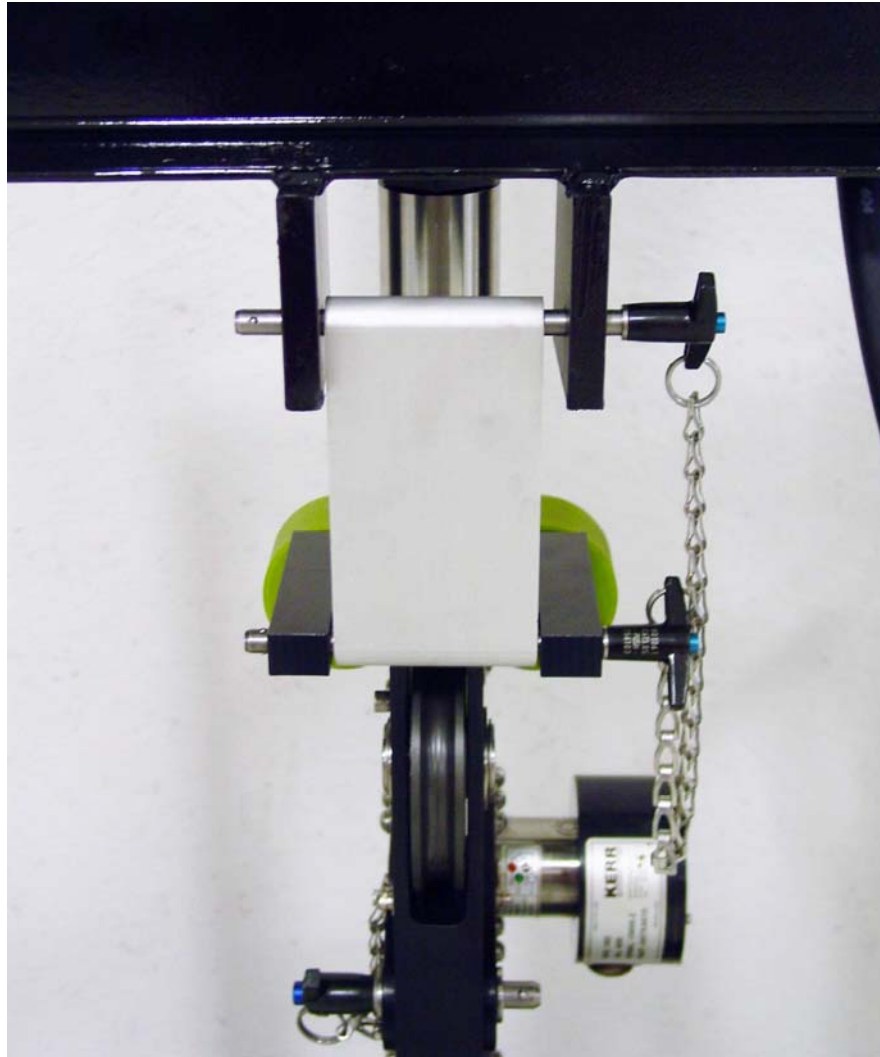


7. Pull up to 50% of the wireline cable breaking strength then release.
8. Repeat this step several times to pull the stretch out of the cable.

Note: After the cable has been used many times for testing, a bend in the cable will form where it bends around the tension wheel. At this time, pull the cable to 10,000 lbs and hold it for 1 hour to remove the bend.

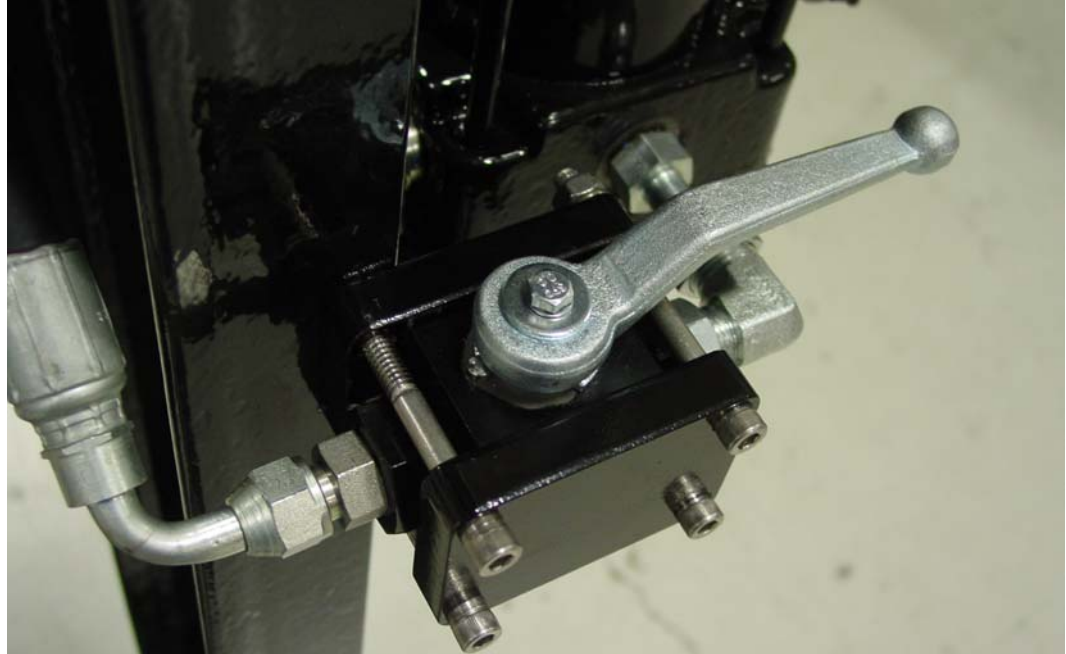
The cable should be replaced periodically.

9. Install the measuring head in the stand by connecting the top frame of the measuring head to the mounting bracket. Use a locking pin to secure the head to the bracket.



10. Connect the load pin on the measuring head to a logging computer or to the ALS8A101 secondary tension display panel.
11. Verify that the tension signal is being output from the load pin.
12. Apply tension to the wireline cable.
13. Compare the value read from the load pin to the actual value.
14. If the differences are greater than 3% then action should be taken to correct the readings from the measuring head.

15. The applied tension can be held at a constant value by closing the pressure hold valve.



1.4 ALS8A100 TENSION PANEL OPERATING INSTRUCTIONS

1. To set up the ALS8A100 panel for the head tester press the menu button and select 'LC'.

The panel will display 'Hd__LC', 'Hd__5H' or 'Hd_CAL'. Use the +/- switch to change the display until 'Hd__LC' is displayed.

2. Press the menu button again and the panel will display 'FS XY.AB' where X is tens of thousands of pounds, Y is thousands of pounds, A is hundreds of pounds and B is 10's of pounds. Use the +/- switch to select 25.00.
3. Press the menu button again and the panel will display '5n' and X.ABC where X.ABC is the sensitivity in millivolts/volt of the load cell. Use the +/- switch to select 4.XYZ that is recorded on a tag that is attached to the load cell..
4. Press the menu again and the panel will display '5C' for shunt cal. The tension test stand load cells do not have a shunt cal so press the menu button again.
5. The panel now energizes the shunt cal but since there is none no change is displayed.
6. Press the menu button again and the panel displays 'AN' for angle and allows you to enter various angles. Use the +/- switch to select '0'.
7. Press the menu button again and the panel displays 'UN' for units. Select 'LB' for pounds or 'Hg' for kilo grams.
8. Press the menu button again and the panel displays 'AccEpt'. If you want to accept the changes put the +/- switch in the '+' position. The panel displays 'YES'. Pushing the menu button writes the new values to flash. To not accept the changes put the '+/-' switch to the '-' position. The panel display 'NO'. Push the menu button again.

1.5 OBTAINING TECHNICAL ASSISTANCE

Call BenchMark Wireline Products Inc. at +1 281 346 4300

Or contact by email mail@benchmarkwireline.com

Or fax in request at +1 281 346 4301

Information is also available on website www.benchmarkwireline.com

Parts can be ordered by email, phone, or fax

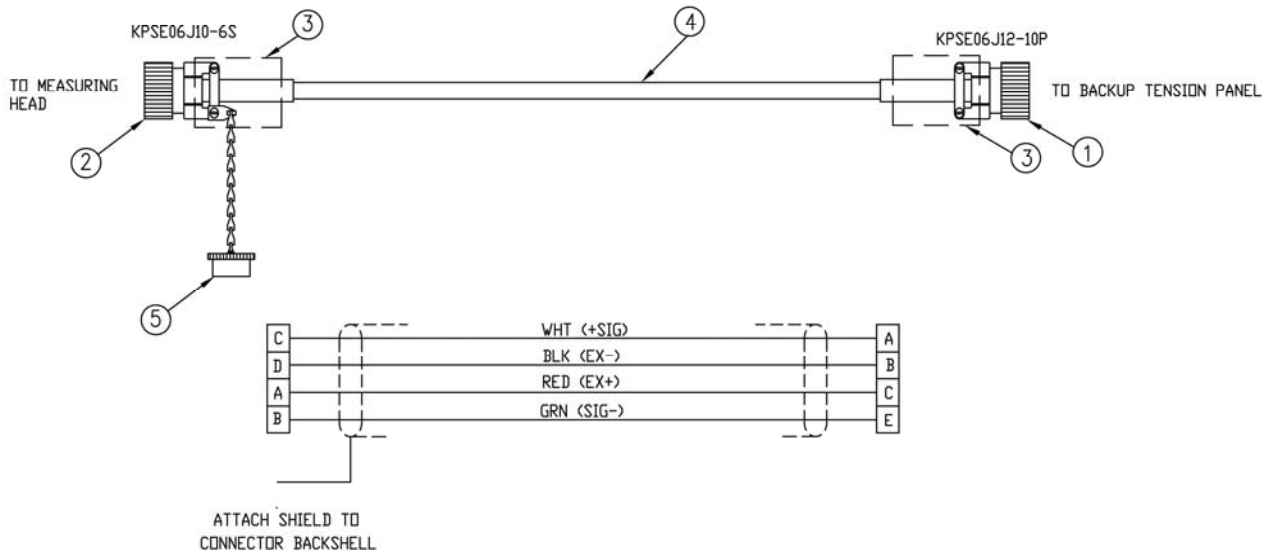
Equipment can be returned for calibration, repair and maintenance. Please notify us by phone, email, or fax before sending any equipment.

To return equipment to BenchMark, ship it to:

BenchMark Wireline Products
36220 FM 1093
Simonton, Texas 77476
U.S.A.

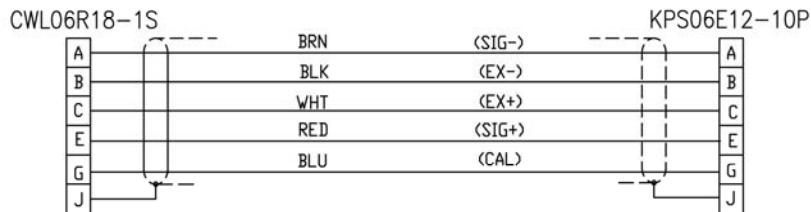
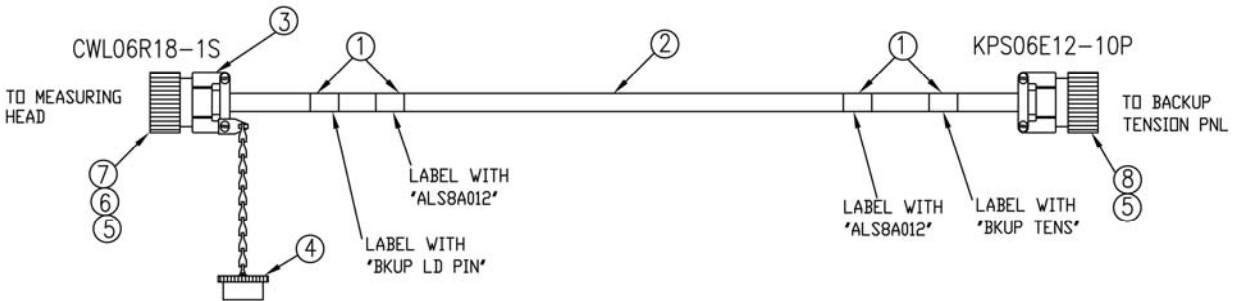
2.0 DRAWINGS AND PARTS LIST

2.1 ALS8A010-2 CABLE ASSY LOAD CELL TO ALS8A100 TENSION DISPLAY PANEL



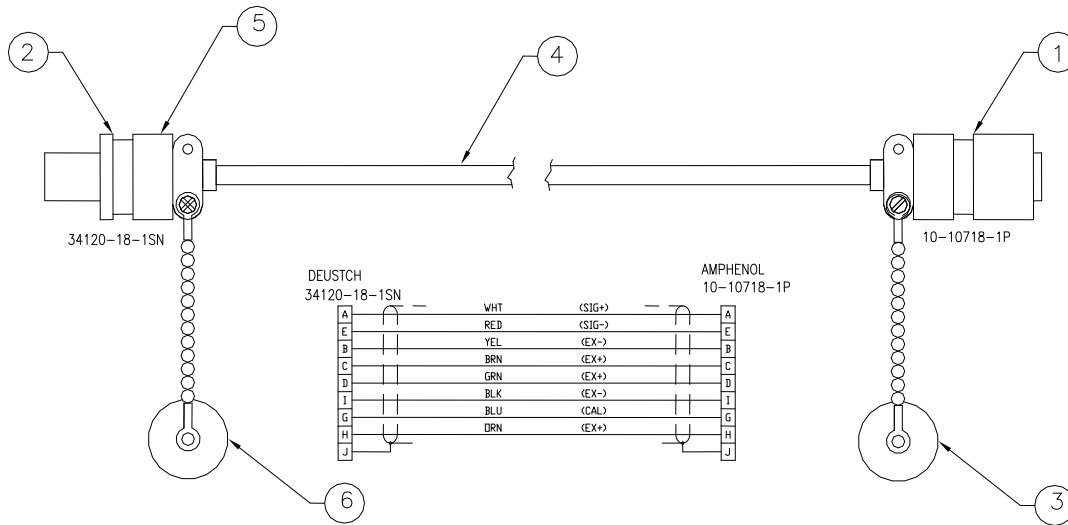
ITEM	P/N	DESCRIPTION	QTY	REF
1	AMS4P181	CONN KPSE06J12-10P STR PLUG	1 EA	TENSION PANEL END
2	AMS4P266	CONN KPSE06J10-6S STR PLUG	1 EA	LOAD CELL END
3	ACMU1P88	TUBING SHRINK 1.00 ADH LINED	1 EA	
4	AMS7P093	CABLE 22/2P BELDEN 8723	2 ft	

2.2 ALS8A012-5 CABLE ASSY LOAD PIN TO ALS8A101 SECONDARY TENSION DISPLAY PANEL



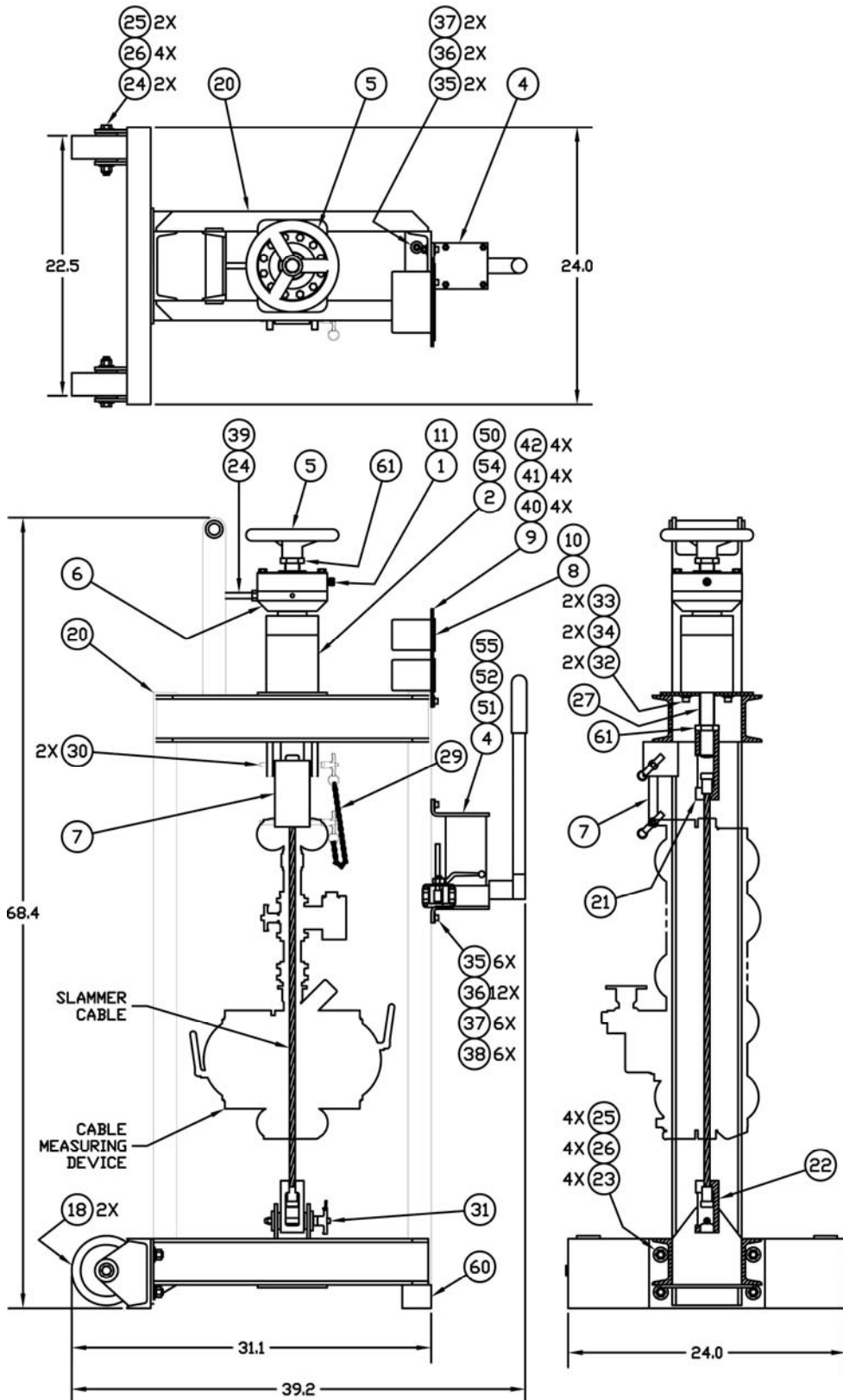
ITEM	P/N	DESCRIPTION	QTY
2	AMS4P965	CABLE SHIELDED 8C/20 AWG	5 FT
3	AMS1P130	CONN BACKSHELL RSI G61307-185	1 EA
4	AM5KP148	DUST PLUG CW50N16A CANNON CWL	1 EA
5	ACMU1P88	TUBING SHRINK 1.00 ADH LINED	2 EA
6	ACMU1P89	TUBING SHRINK 1.50 ADH LINED	1 EA
7	AM5KP146	CONN CWLO6R18-1S CABLE PLUG	1 EA
8	AMS4P181	CONN KPSE06J12-10P STR PLUG	1 EA

2.3 AMS4A351-20 CABLE ASSY LOAD PIN TO LOGGING SYSTEM



ITEM	P/N	DESCRIPTION	QTY
1	AM5KP146	CONN CWL06R18-1S CABLE PLUG	1 EA
2	AM5KP068	CONN 10-107218-1P BENDIX QWL	1 EA
3	AM5KP118	O-RING 2-023 BUNA N L/P CONN	1 EA
4	AMS1P056	WASHER #8 LOCK SST	4 EA
5	AMS4P982	CONN 10-107118-1P QWL STYLE	0 EA
6	C276P142	SCREW 8-32 X 1/2 PHIL PAN SST	4 EA
7	FSU2M018	ADAPTER CONN 1/2 NPT TO QWL18	1 EA
8	FSU2P027	CORDGRIP 1/2 NPT .25-.38ID	1 EA
9	AM5KP148	DUST PLUG CW50N16A CANNON CWL	0 EA
10	AMS4P221	CABLE 20/8C ALPHA 25468 BLACK	20 FT
11	AMS1P130	CONN BACKSHELL RSI G61307-185	1 EA
12	AMS4P985	DUST CAP 10-101063-18 QWL	0 EA

2.4 TEST STAND DRAWINGS



2.5 TEST STAND PARTS LIST

ITEM	P/N	DESCRIPTION	QTY	UM
1	FSU2P125	LOAD CELL 25,000 LB UNIV FLAT	1	EA
2	FSU2P130	CYLINDER 30T 2.50" STROKE	1	EA
3	FSU1P124	VALVE BALL 2-WAY SAE-06	1	EA
4	FSU2P122	PUMP HYD HAND 6KPSI 50CUIN	1	EA
5	FSU2M145	WHEEL HAND 8 IN DISHED	1	EA
6	FSU2M126	BASE MOD LOAD CELL 25K	1	EA
7	FSU2M157	KNUCKLE UPRIGHT TENS TST	1	EA
8	ALS8A100	PANEL AMS LOAD CELL TEN DSP W/BATT	1	EA
OPT	ALS8A101	PANEL AMS AM5K TN DISPLAY W/BATT	0	EA
9	FSU2M155	PLATE DUAL TENSION DISPLAY	1	EA
10	ALS8A010-2	CABLE ASSY BACKUP TENSION TO	1	EA
11	AM5KP034	DUST CAP KPT8110C RECEPT	1	EA
12	ALS8A012-5	CABLE ASSY LD PIN TO TENS BKUP	0	EA
14	AMS4A351-20	CABLE ASSY LOAD PIN EXTENSION	0	EA
18	FSU2P143	WHEEL 6 X 2 PU AL CORE	2	EA
19	FSU2M146	PLATE CLAMP BALL VALVE	2	EA
20	FSU2M150	FRAME TENSION TEST 5K 12.5K#	1	EA
21	FSU2M151	FITTING CABLE WF THD TV	1	EA
22	FSU2M152	FITTING CABLE WF PINNED TV	1	EA
23	C276P242	SCREW 1/2-13 X 1-1/2 HEX HD SS	4	EA
24	FSU2P142	SCREW 1/2-13 X 4 HEX HD SST	3	EA
25	C276P017	NUT 1/2-13 ELASTIC STOP SST	6	EA
26	C276P037	WASHER 1/2 FLAT SST	12	EA
27	FSU2P116	ROD ALL-THREAD 1-1/4 - 12 GRB7	18	IN
29	AM5KP075	CHAIN SASH #35 SST	12	IN
30	AM3KP073	PIN QUICK REL 3/8 OD X 5 GRIP	2	EA
31	FSU2P054	PIN QUICK REL 1/2 OD X 4 GRIP	1	EA
32	AM5KP080	SCREW 3/8-16 X 3/4 SOC HD SST	2	EA
33	AMS1P058	WASHER 3/8 LOCK SS	2	EA
34	C276P513	WASHER 3/8 FLAT SST	2	EA
35	AMS1P046	SCREW 5/16-18 X 1 SHCS SST	8	EA
36	C276P039	WASHER 5/16 FLAT SST	14	EA
37	AMS1P047	WASHER 5/16 LOCK SS	8	EA
38	AMS8P094	NUT 5/16-18 HEX SST	6	EA
39	AMS1P065	NUT 1/2-13 HEX SST	1	EA
40	C276P334	SCREW 10-32 X 1/2 PHIL PAN SST	4	EA
41	C276P035	WASHER #10 LOCK SS	4	EA
42	AMS1P054	WASHER #10 FLAT SS	4	EA

43	AMS5P016	SCREW 1/4-20 X 2-3/4 SOC HD SS	4	EA
44	C276P036	WASHER 1/4 LOCK SS	2	EA
45	C276P016	NUT 1/4-20 HEX SST	2	EA
48	FSU1P039	ADPTR #6 SAE X #6 ORS 90 STL	1	EA
49	FSU1P044	ADPTR #6 SAE X #6 ORSF STR STL	1	EA
50	FSU1P037	ADPTR 3/8 NPT X #6 JIC 90 STL	1	EA
51	FSU1P036	ADPTR #6 SAE X #6 JIC STR STL	1	EA
52	FSU1M096-22	HOSE #6 JIC STR X 90 4KPSI WP	1	EA
54	FSU2P141	CPLG QD M 3/8NPT ENERPAC	1	EA
55	FSU2P101	OIL HYD ENERPAC	0	QT
60	FSU2P140	BUMPER RECT 4 X 2-1/2 X 2	1	EA
61	FSU2P144	NUT 1-1/4-12 JAM HEX STL PL	2	EA