An Oshkosh Corporation Company

SERVICE LETTER

Reference: #C110B3

May 27, 2010

SAFETY

PRODUCT IMPROVEMENT PROGRAM FOR REPLACING THE LOAD STABILITY INDICATOR (LSI) SENSOR AND CALIBRATING THE LSI SYSTEM ON CERTAIN CAT MODEL TH336, TH337, TH406, TH407, TH414, AND TH514 TELEHANDLERS.

ATTENTION: This notice is being issued to advise you of the requirement to update certain Caterpillar ("CAT") Telehandlers that were manufactured by JLG Industries, Inc. ("JLG"). This program must be completed as soon as possible on all affected machines.

PROBLEM:

The rear axle load stability indicator (LSI) sensor may have been inconsistently installed during assembly. Inconsistencies in the use of adhesive to bond the sensor to the axle, as well as inconsistencies in the surface preparation can cause inaccurate or no signal from the sensor. Inaccurate or no load stability measurements could fail to accurately warn the operator of the machine's forward stability limits. This could result in machine tip over.

AFFECTED PRODUCTS:

This issue affects certain CAT Telehandlers manufactured by JLG. The enclosed master serial number list indicates the serial numbers of all units affected by this Program.

PARTS NEEDED:

The following parts must be ordered to accomplish this update:

Quantity	Description	Part Number
1	Rear Axle Load Stability Indicator Sensor	320-9307
1	Adhesive Kit	308-3506

ACTION REQUIRED:

Parts Stock:

No action required.

Affected Machines:

Perform the enclosed LSI Sensor Replacement and Calibration Procedure:

- Replace the original LSI sensor and attachment hardware.
- Recalibrate the LSI system using the calibration procedure.

SERVICE CLAIM ALLOWANCES:

To receive reimbursement, file a service claim through the normal CAT service claims process. When filing this claim through the CAT system, please use the following codes in the appropriate input fields:

Input Field	Before Failure
Part Causing Failure	C110B3
Group Number	7856
Warranty Claim Description	56
SIMS Description Code	T

The reimbursement terms of this program are as follows:

Caterpillar		Dealer Suggested		Customer Suggested	
Parts %	Labor Hrs %	Parts %	Labor Hrs %	Parts %	Labor Hrs %
100%	100%	0%	0%	0%	0%

Labor Time:

- This is a 2 hour job.
- Up to 2 hours for travel.
- Up to 100 km for mileage.

PARTS DISPOSITION:

Handle the parts in accordance with your Warranty Bulletin on warranty parts handling.

CONTACTS:

A copy of this Service Letter will be available on the JLG-CAT Alliance website. If you have any questions or need further information, please contact the JLG-CAT Alliance Product Support.

Enclosures:
LSI Sensor Replacement and Calibration Procedure
Master List of Affected Machines

PROCEDURE: **LSI Sensor Replacement and Calibration, Service Letter #C110B3**
MODELS: **CAT Telehandlers Model TH336, TH337, TH406, TH407, TH414, and TH514**

Parts/Material Required:

- Rear Axle LSI Sensor, #320-9307, quantity 1
- Adhesive Kit, #308-3506, quantity 1

CAUTION: ***USE ALL APPLICABLE SAFETY PRECAUTIONS WHILE WORKING ON, UNDER OR AROUND ANY MACHINERY.***

REVIEW EACH OF THE PROCEDURES DESCRIBED BELOW TO DETERMINE WHICH IS MORE FEASIBLE FOR THE MACHINE AT HAND. PERFORM ONLY ONE OF THE ENCLOSED PROCEDURES:

- **Procedure A** requires the use of a calibrated scale (portable scales are acceptable) and the availability of a test weight of up to 3000 kg, depending on model. This is considered the Standard LSI Calibration.

- **Procedure B** can be accomplished in the field, requiring a test weight of up to 3000 kg, depending on model. This is considered the LSI Field Calibration. No scales are required for accomplishment of this procedure.

Procedure A – LSI Sensor Replacement and Standard Calibration:

A

1. Position machine on a firm and level surface, where it can remain stationary for at least two (2) hours. Ensure the frame is level using the level in the cab.

2. Fully retract and lower the boom to the stowed position. Turn off the engine, apply the park brake, and remove the key. Tag the machine "Out of service – Do not operate." Place wheel chocks in front of and behind the rear wheels.

3. Locate and unplug the existing Load Stability Indicator (LSI) sensor from the cable coming from the control unit, located on top of the rear axle, on the cab side of the machine. Retain the cable clamp for reinstallation.

Figure 1

4. Remove the bolts securing the sensor to the axle. If necessary, gently tap on the sides of the sensor to break the bond with the axle. Discard and destroy the original sensor and mounting hardware. If present, remove any residual sealant in the sensor mounting area of the axle.

5. Ensure the threads in the axle for the sensor's retaining bolts are clean, free from rust, water, adhesive, paint, or other residual debris. If necessary, thread an M10 plug tap through the bolt holes to ensure clean threads.

6. Using a suitable degreasing agent, clean any residual adhesive, paint, dirt, debris, etc. from the threaded mounting holes, and the sensor mounting surface on the rear axle. Only use the amount of degreasing agent necessary for cleaning the mounting surface. Remove any residual degreasing agent that remains on the mounting surface or bolt holes.

IMPORTANT! FOR THE LSI SYSTEM TO FUNCTION PROPERLY, IT IS NECESSARY THAT THE SURFACE ON THE AXLE IS PERFECTLY CLEAN, FLAT, WITHOUT IRREGULARITY, PROTRUSIONS, OR DIFFERENCES OF LEVEL.

A

7. Apply a layer of adhesive from the adhesive kit, to the mounting face of the sensor. Ensure the mounting face of the sensor is clean and free from dust or other contaminants.

8. Apply a layer of activator from the adhesive kit, to the mounting face of the axle. Ensure each corresponding surfaces are sufficiently covered to ensure proper bonding.

9. Install the sensor onto the mounting surface of the axle. Ensure the electrical lead exits the sensor in the corner direction, similar to the original sensor.

10. Secure with the hardware provided with the sensor. Tighten the two bolts in the following sequence:

    a) Tighten each bolt “finger tight.”

    b) Tighten each bolt to a torque setting of 35 Nm.

    c) Tighten each bolt to a torque setting of 70 Nm.

    IMPORTANT! IT IS IMPERATIVE THE AXLE AND SENSOR ARE NOT STRESSED DURING THE BONDING TIME. DO NOT DRIVE THE MACHINE FOR TWO (2) HOURS AFTER INSTALLING THE SENSOR.

11. After two hours of stationary cure time, the machine may be driven.

12. No load may be lifted for at least six (6) hours.

    NOTE: THE SENSOR AND SURROUNDING AREA CAN BE PAINTED AFTER TWELVE (12) HOURS OF CURING. IF THE AREA IS REPAINTED, THE ORIGINAL SEALANT (IF PRESENT) DOES NOT NEED REAPPLIED.

13. Connect the new sensor to the same location in the cable coming from the control unit as the original, and secure into place with the original cable clamp.

14. Once the sensor is properly installed, drive the machine to a calibrated scale. Portable scales are acceptable to use as well.

A

15. Before beginning the LSI calibration, the following criteria must be met:

    - The sensor must be mounted according to the above instructions at least six (6) hours before beginning calibration.
    - The machine control system must be powered on for at least ten (10) minutes before beginning calibration.
    - The calibration must be conducted with the standard carriage and forks attached to the machine.
    - If the machine is equipped with stabilizers, they shall remain in the "up" position for the entire calibration procedure.
    - The machine must be on a level surface with the wheels steered straight and park brake OFF, with straight driving of at least two (2) meters being the last movement before entering a calibration point.
    - The calibration must be completed within thirty (30) minutes after starting the procedure.

16. Place the appropriate additional test weight, listed in Table 1, within the machine's reach, in front of, but not contacting the scale.

17. Position the machine so that only the rear wheels are on the load-bearing surface of the scale. Ensure the boom is level (zero degrees) and fully retracted, and that the forks are level (not contacting the ground) with no load. Shut off the engine.

18. With the ignition key in the OFF position, press and hold the TEST button on the LSI display and turn the ignition key to the engine START position. Release the ignition key when the engine starts, but continue to hold the TEST button on the LSI display until the LED power indicator on the LSI display begins to flash (approximately two (2) seconds).

19. Release TEST key within two (2) seconds of the power LED flashing. The lower green LED of the scale should be illuminated.

20. Press the TEST button on the LSI display and release. The lower green LED should flash for approximately eight (8) seconds while the calibration point is read. Following a successful calibration of the first point, the buzzer will sound for two (2) seconds, the green LED will be turned off, and the top red LED will be illuminated.

21. Achieve the rear axle weight shown in Table 1 by the following steps:

    a) Without driving the machine, extend the boom to reach the additional weight positioned in Step #16. Lift the additional weight until the boom is horizontal. Fully retract the boom.

    b) With the additional weight on the forks, begin to telescope the boom outward until the scale shows the appropriate rear axle weight shown in Table 1. As the boom telescopes, the rear axle weight will decrease.

A

Table 1

Model	Market	Test Weight on Forks	Rear Axle Weight	
			Acceptable Range	Nominal Value
TH336	CE	3000 kg (6614 lb)	950 kg – 1050 kg (2094 lb – 2315 lb)	1000 kg (2205 lb)
TH337	CE	1900 kg (4189 lb)	950 kg– 1050 kg (2094 lb – 2315 lb)	1000 kg (2205 lb)
TH406	CE	3000 kg (6614 lb)	850 kg – 950 kg (1874 lb - 2094 lb)	900 kg (1984 lb)
	AUS		1472 kg - 1572 kg (3245 lb - 3466 lb)	1522 kg (3355 lb)
TH407	CE	3000 kg (6614 lb)	700 kg – 800 kg (1543 lb - 1764 lb)	750 kg (1654 lb)
	AUS		1725 kg - 1825 kg (3803 lb - 4023 lb)	1775 kg (3913 lb)
TH414	CE	640 kg (1411 lb)	1450 kg – 1550 kg (3197 lb - 3417 lb)	1500 kg (3307 lb)
TH514	CE	1000 kg (2205 lb)	1250 kg – 1350 kg (2756 lb - 2976 lb)	1300 kg (2866 lb)

c) Once the appropriate rear axle weight is achieved, press the TEST button on the LSI display and release. The top red LED should flash for approximately eight (8) seconds while the calibration is read.

d) Following a successful calibration of the second point, the buzzer will sound constantly, the red LED will be turned off, and the green power LED will be illuminated.

e) Disengage the test weight and fully retract the boom. Turn the ignition key to the OFF position. The LSI is now calibrated.

22. Prepare the unit for operation. Cycle all functions to confirm safe and proper operation.

23. Verify proper operation of the LSI by the following steps:

a) Fully retract and level the boom, with no load. Do not raise the boom during this test.

b) Level the frame using the level in the cab.

A

c) Press the test button on the LSI display. This will cause all the LEDs to flash on and an audible warning to sound. This indicates that the system is functioning properly. If the test gives a different result, the system is not functioning properly and the machine must be repaired before returning to service.

24. The machine may be returned to service once proper operation is confirmed.

Should any further discrepancies be discovered during the accomplishment of this procedure, please contact JLG for further evaluation.

B

Procedure B – LSI Sensor Replacement and Field Calibration:

1. Position machine on a firm and level surface, where it can remain stationary for at least two (2) hours. Ensure the frame is level using the level in the cab.

2. Fully retract and lower the boom to the stowed position. Turn off the engine, apply the park brake, and remove the key. Tag the machine "Out of service – Do not operate." Place wheel chocks in front of and behind the rear wheels.

3. Locate and unplug the existing Load Stability Indicator (LSI) sensor from the cable coming from the control unit, located on top of the rear axle, on the cab side of the machine. Reference Figure 1. Retain the cable clamp for reinstallation.

Figure 1

4. Remove the bolts securing the sensor to the axle. If necessary, gently tap on the sides of the sensor to break the bond with the axle. Discard and destroy the original sensor and mounting hardware. If present, remove any residual sealant in the sensor mounting area of the axle.

5. Ensure the threads in the axle for the sensor's retaining bolts are clean, free from rust, water, adhesive, paint, or other residual debris. If necessary, thread an M10 plug tap through the bolt holes to ensure clean threads.

6. Using a suitable degreasing agent, clean any residual adhesive, paint, dirt, debris, etc. from the threaded mounting holes, and the sensor mounting surface on the rear axle. Only use the amount of degreasing agent necessary for cleaning the mounting surface. Remove any residual degreasing agent that remains on the mounting surface or bolt holes.

IMPORTANT! FOR THE LSI SYSTEM TO FUNCTION PROPERLY, IT IS NECESSARY THAT THE SURFACE ON THE AXLE IS PERFECTLY CLEAN, FLAT, WITHOUT IRREGULARITY, PROTRUSIONS, OR DIFFERENCES OF LEVEL.

B

7. Apply a layer of adhesive from the adhesive kit to the mounting face of the sensor. Ensure the mounting face of the sensor is clean and free from dust or other contaminants.

8. Apply a layer of activator from the adhesive kit to the mounting face of the axle. Ensure each corresponding surfaces are sufficiently covered to ensure proper bonding.

9. Install the sensor onto the mounting surface of the axle. Ensure the electrical lead exits the sensor in the corner direction, similar to the original sensor.

10. Secure with the hardware provided with the sensor. Tighten the two bolts in the following sequence:

    a. Tighten each bolt “finger tight.”

    b. Tighten each bolt to a torque setting of 35 Nm.

    c. Tighten each bolt to a torque setting of 70 Nm.

IMPORTANT! IT IS IMPERATIVE THE AXLE AND SENSOR ARE NOT STRESSED DURING THE BONDING TIME. DO NOT DRIVE THE MACHINE FOR TWO (2) HOURS AFTER INSTALLING THE SENSOR.

11. After two hours of stationary cure time, the machine may be driven.

12. No load may be lifted for at least six (6) hours.

NOTE: THE SENSOR AND SURROUNDING AREA CAN BE PAINTED AFTER TWELVE (12) HOURS OF CURING. IF THE AREA IS REPAINTED, THE ORIGINAL SEALANT (IF PRESENT) DOES NOT NEED REAPPLIED.

13. Connect the new sensor to the same location in the cable coming from the control unit as the original, and secure into place with the original cable clamp.

B

14. Once the sensor is properly installed, and before beginning the LSI field calibration, the following criteria must be met:

    - The sensor must be mounted according to the above instructions at least six (6) hours before beginning calibration.
    - The calibration must be conducted with the standard carriage and forks attached to the machine.
    - If the machine is equipped with stabilizers, they shall remain in the “up” position for the entire calibration procedure.
    - The machine must be on a level surface with the wheels steered straight and park brake OFF, with straight driving of at least two (2) meters being the last movement before entering a calibration point.
    - The calibration must be completed within thirty (30) minutes after starting the procedure.

15. Reference Table 1 and Figure 2 below for the following steps. With empty forks, extend the boom to the distance shown as the “Point of Tipping” and temporarily mark that location on the second boom section with tape, grease pencil, etc. In addition, mark the “Point of Calibration” distance, also shown in Table 1. Fully retract the boom.

Table 1

Model	Market	Test Weight on Forks	Distance 'X'	
			Point of Tipping	Point of Calibration
TH336	CE	3000 kg (6614 lb)	1220 mm (48 in)	505 mm (20 in)
TH337	CE	1900 kg (4189 lb)	2270 mm (89 in)	1215 mm (48 in)
TH406	CE	3000 kg (6614 lb)	1950 mm (77 in)	1295 mm (51 in)
	AUS	3000 kg (6614 lb)	1950 mm (77 in)	850 mm (33 in)
TH407	CE	3000 kg (6614 lb)	1880 mm (74 in)	1350 mm (53 in)
	AUS	3000 kg (6614 lb)	1880 mm (74 in)	585 mm (23 in)
TH414	CE	640 kg (1411 lb)	3280 mm (129 in)	2060 mm (81 in)
TH514	CE	1000 kg (2205 lb)	3270 mm (129 in)	2300 mm (90 in)

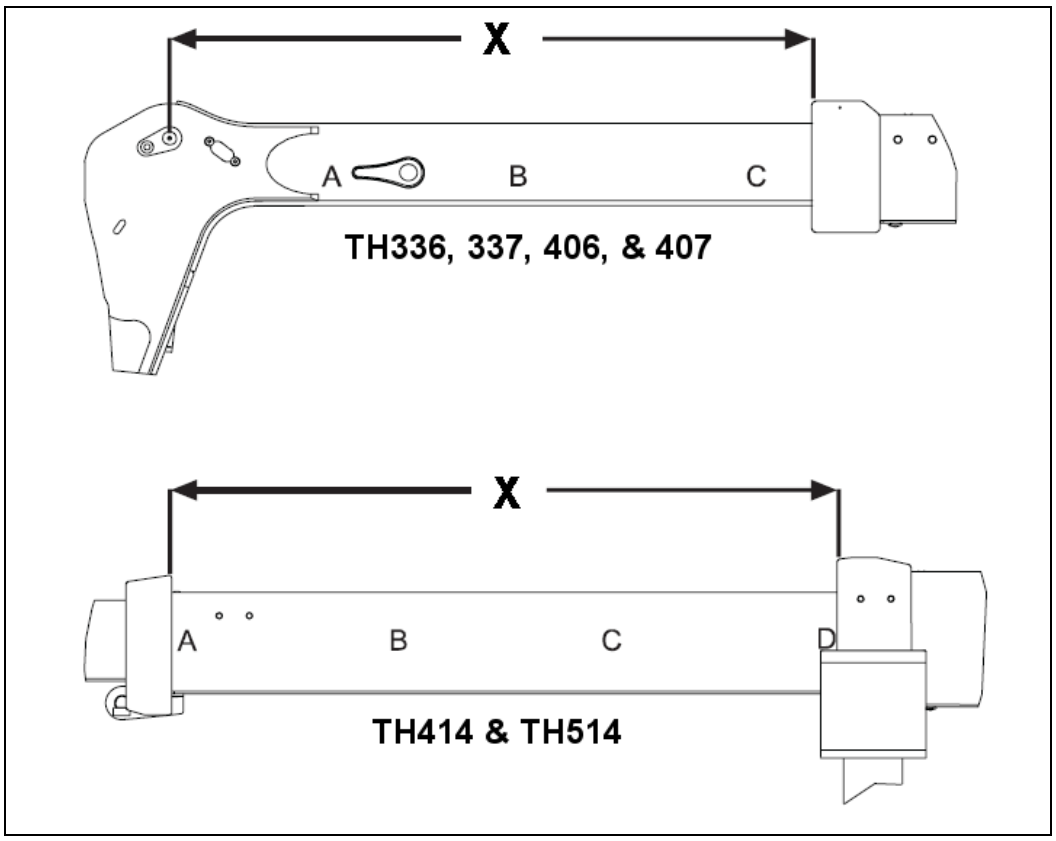

Figure 2

16. Engage the test weight with the forks, and raise the load so that the boom is level (zero degrees). With the appropriate test weight securely on the forks, extend the boom horizontally until the machine begins to tip.

17. If the rear wheels begin to leave the ground before the point of tipping distance is achieved, remove sufficient weight from the forks in order to reach the appropriate distance before tipping. If the point of tipping distance is achieved before the rear wheels become “light”, carefully add weight to the forks until the rear wheels begin to leave the ground at the Point of Tipping distance, listed in Table 1.

18. By confirming that the machine physically tips at the listed Point of Tipping distance, the correct amount of weight is now on the forks. Retract the boom and place the test weight on the ground. Disengage the load and fully retract and lower the boom.

19. Ensure the boom is level and fully retracted, and that the forks are level (not contacting the ground) with no load. Apply the park brake and shut the engine off.

20. With the ignition key in the OFF position, press and hold the TEST button on the LSI display and turn the ignition key to the engine START position. Release the ignition key when the engine starts, but continue to hold the TEST button on the LSI display until the LED power indicator on the LSI display begins to flash (approximately two (2) seconds).

B

21. Release TEST key within two (2) seconds of the power LED flashing. The lower green LED of the scale should be illuminated.

22. Press the TEST button on the LSI display and release. The lower green LED should flash for approximately eight (8) seconds while the calibration point is read. Following a successful calibration of the first point, the buzzer will sound for two (2) seconds, the green LED will be turned off, and the top red LED will be illuminated.

23. Without moving the machine, pick up the test weight in front of the machine. Ensure the forks are no more than six (6) inches off of the ground.

24. With the boom horizontal (zero degrees), slowly extend the boom to the Point of Calibration listed in Table 1.

25. Press the TEST button on the LSI display and release. The top red LED should flash for approximately eight (8) seconds while the calibration is read. Following a successful calibration of the second point, the buzzer will sound constantly, the red LED will be turned off, and the green power LED will be illuminated.

26. Disengage the test weight and fully retract the boom. Turn the ignition key to the OFF position. The LSI is now calibrated.

27. Prepare the unit for operation. Cycle all functions to confirm safe and proper operation.

28. Verify proper operation of the LSI by the following steps:

    a. Fully retract and level the boom, with no load. Do not raise the boom during this test.

    b. Level the frame using the level in the cab.

    c. Press the test button on the LSI display. This will cause all the LEDs to flash on and an audible warning to sound. This indicates that the system is functioning properly. If the test gives a different result, the system is not functioning properly and the machine must be repaired before returning to service.

29. The machine may be returned to service once proper operation is confirmed.

Should any further discrepancies be discovered during the accomplishment of this procedure, please contact JLG for further evaluation.

Safety Campaign Publication #C110B3
Master Serial Number Listing

Model TH336

TDE00104	TDE00115	TDE00126	TDE00138	TDE00150	TDE00165	TDE00178
TDE00105	TDE00116	TDE00127	TDE00139	TDE00152	TDE00166	TDE00179
TDE00106	TDE00117	TDE00128	TDE00140	TDE00153	TDE00167	TDE00180
TDE00107	TDE00118	TDE00129	TDE00141	TDE00154	TDE00168	TDE00181
TDE00108	TDE00119	TDE00130	TDE00142	TDE00155	TDE00169	TDE00182
TDE00109	TDE00120	TDE00131	TDE00143	TDE00157	TDE00171	TDE00183
TDE00110	TDE00121	TDE00132	TDE00145	TDE00158	TDE00172	TDE00184
TDE00111	TDE00122	TDE00133	TDE00146	TDE00160	TDE00173	TDE00185
TDE00112	TDE00123	TDE00134	TDE00147	TDE00162	TDE00175	TDE00186
TDE00113	TDE00124	TDE00136	TDE00148	TDE00163	TDE00176	TDE00187
TDE00114	TDE00125	TDE00137	TDE00149	TDE00164	TDE00177	TDE00193

Model TH337

TDF00110	TDF00124	TDF00138	TDF00152	TDF00166	TDF00180	TDF00201
TDF00111	TDF00125	TDF00139	TDF00153	TDF00167	TDF00181	TDF00204
TDF00112	TDF00126	TDF00140	TDF00154	TDF00168	TDF00182	TDF00205
TDF00113	TDF00127	TDF00141	TDF00155	TDF00169	TDF00183	TDF00206
TDF00114	TDF00128	TDF00142	TDF00156	TDF00170	TDF00184	TDF00207
TDF00115	TDF00129	TDF00143	TDF00157	TDF00171	TDF00186	TDF00208
TDF00116	TDF00130	TDF00144	TDF00158	TDF00172	TDF00189	TDF00209
TDF00117	TDF00131	TDF00145	TDF00159	TDF00173	TDF00190	TDF00210
TDF00118	TDF00132	TDF00146	TDF00160	TDF00174	TDF00191	TDF00211
TDF00119	TDF00133	TDF00147	TDF00161	TDF00175	TDF00192	TDF00212
TDF00120	TDF00134	TDF00148	TDF00162	TDF00176	TDF00193	
TDF00121	TDF00135	TDF00149	TDF00163	TDF00177	TDF00195	
TDF00122	TDF00136	TDF00150	TDF00164	TDF00178	TDF00198	
TDF00123	TDF00137	TDF00151	TDF00165	TDF00179	TDF00199	

Model TH406

TBX00197	TBX00219	TBX00248	TBX00277	TBX00303	TBX00321	TBX00338
TBX00199	TBX00220	TBX00249	TBX00278	TBX00304	TBX00322	TBX00339
TBX00201	TBX00221	TBX00250	TBX00280	TBX00305	TBX00323	TBX00340
TBX00202	TBX00223	TBX00251	TBX00281	TBX00306	TBX00324	TBX00341
TBX00203	TBX00224	TBX00252	TBX00282	TBX00307	TBX00325	TBX00343
TBX00204	TBX00228	TBX00253	TBX00285	TBX00312	TBX00326	TBX00344
TBX00205	TBX00237	TBX00254	TBX00286	TBX00313	TBX00327	TBX00345
TBX00207	TBX00238	TBX00257	TBX00289	TBX00314	TBX00328	TBX00346
TBX00208	TBX00240	TBX00259	TBX00290	TBX00315	TBX00329	TBX00347
TBX00210	TBX00241	TBX00263	TBX00295	TBX00316	TBX00330	TBX00348
TBX00212	TBX00244	TBX00265	TBX00299	TBX00317	TBX00331	TBX00349
TBX00215	TBX00245	TBX00271	TBX00300	TBX00318	TBX00332	TBX00350
TBX00217	TBX00246	TBX00272	TBX00301	TBX00319	TBX00336	
TBX00218	TBX00247	TBX00275	TBX00302	TBX00320	TBX00337	

Safety Campaign Publication #C110B3
Master Serial Number Listing

Model TH407

TBY00312	TBY00378	TBY00447	TBY00521	TBY00580	TBY00636	TBY00697
TBY00314	TBY00379	TBY00449	TBY00522	TBY00581	TBY00637	TBY00698
TBY00315	TBY00380	TBY00450	TBY00523	TBY00582	TBY00639	TBY00699
TBY00321	TBY00381	TBY00451	TBY00524	TBY00583	TBY00641	TBY00700
TBY00322	TBY00382	TBY00452	TBY00525	TBY00584	TBY00644	TBY00701
TBY00323	TBY00383	TBY00454	TBY00526	TBY00585	TBY00647	TBY00702
TBY00324	TBY00385	TBY00456	TBY00527	TBY00586	TBY00649	TBY00703
TBY00326	TBY00388	TBY00457	TBY00529	TBY00587	TBY00651	TBY00704
TBY00327	TBY00390	TBY00458	TBY00530	TBY00589	TBY00652	TBY00705
TBY00328	TBY00391	TBY00459	TBY00531	TBY00590	TBY00653	TBY00706
TBY00331	TBY00392	TBY00460	TBY00532	TBY00591	TBY00654	TBY00707
TBY00333	TBY00394	TBY00461	TBY00533	TBY00592	TBY00655	TBY00708
TBY00334	TBY00396	TBY00463	TBY00534	TBY00594	TBY00656	TBY00709
TBY00335	TBY00397	TBY00464	TBY00537	TBY00595	TBY00657	TBY00710
TBY00336	TBY00398	TBY00465	TBY00538	TBY00596	TBY00658	TBY00711
TBY00338	TBY00399	TBY00466	TBY00540	TBY00597	TBY00659	TBY00712
TBY00339	TBY00400	TBY00467	TBY00541	TBY00598	TBY00660	TBY00713
TBY00340	TBY00402	TBY00469	TBY00542	TBY00599	TBY00661	TBY00714
TBY00341	TBY00404	TBY00470	TBY00543	TBY00600	TBY00662	TBY00715
TBY00342	TBY00405	TBY00471	TBY00544	TBY00602	TBY00663	TBY00716
TBY00343	TBY00406	TBY00473	TBY00545	TBY00603	TBY00664	TBY00717
TBY00345	TBY00407	TBY00474	TBY00546	TBY00605	TBY00666	TBY00718
TBY00346	TBY00408	TBY00475	TBY00547	TBY00606	TBY00668	TBY00719
TBY00348	TBY00410	TBY00476	TBY00550	TBY00608	TBY00669	TBY00720
TBY00349	TBY00411	TBY00477	TBY00551	TBY00609	TBY00670	TBY00721
TBY00350	TBY00412	TBY00478	TBY00554	TBY00610	TBY00671	TBY00722
TBY00351	TBY00413	TBY00479	TBY00555	TBY00611	TBY00672	TBY00723
TBY00352	TBY00415	TBY00480	TBY00556	TBY00612	TBY00673	TBY00724
TBY00353	TBY00417	TBY00482	TBY00557	TBY00613	TBY00674	TBY00725
TBY00354	TBY00418	TBY00483	TBY00558	TBY00614	TBY00675	TBY00726
TBY00355	TBY00421	TBY00484	TBY00559	TBY00615	TBY00676	TBY00727
TBY00356	TBY00422	TBY00486	TBY00560	TBY00616	TBY00677	TBY00728
TBY00357	TBY00423	TBY00487	TBY00561	TBY00617	TBY00678	TBY00729
TBY00358	TBY00425	TBY00488	TBY00562	TBY00618	TBY00679	TBY00730
TBY00359	TBY00426	TBY00490	TBY00563	TBY00619	TBY00680	TBY00731
TBY00361	TBY00427	TBY00491	TBY00564	TBY00620	TBY00681	TBY00732
TBY00362	TBY00428	TBY00493	TBY00565	TBY00621	TBY00682	TBY00733
TBY00364	TBY00429	TBY00495	TBY00566	TBY00622	TBY00683	TBY00734
TBY00365	TBY00430	TBY00496	TBY00567	TBY00623	TBY00684	TBY00735
TBY00366	TBY00431	TBY00497	TBY00568	TBY00624	TBY00685	TBY00736
TBY00367	TBY00433	TBY00498	TBY00569	TBY00625	TBY00686	TBY00737
TBY00368	TBY00434	TBY00500	TBY00570	TBY00626	TBY00687	TBY00738
TBY00369	TBY00435	TBY00501	TBY00571	TBY00627	TBY00688	TBY00740
TBY00370	TBY00436	TBY00502	TBY00572	TBY00628	TBY00689	TBY00741
TBY00371	TBY00437	TBY00503	TBY00573	TBY00629	TBY00690	TBY00742
TBY00372	TBY00439	TBY00504	TBY00574	TBY00630	TBY00691	TBY00746
TBY00373	TBY00440	TBY00516	TBY00575	TBY00631	TBY00692	TBY00747
TBY00374	TBY00441	TBY00517	TBY00576	TBY00632	TBY00693	
TBY00375	TBY00442	TBY00518	TBY00577	TBY00633	TBY00694	
TBY00376	TBY00444	TBY00519	TBY00578	TBY00634	TBY00695	
TBY00377	TBY00445	TBY00520	TBY00579	TBY00635	TBY00696	

Safety Campaign Publication #C110B3
Master Serial Number Listing

Model TH414

TBZ00115	TBZ00233	TBZ00309	TBZ00364	TBZ00394	TBZ00457	TBZ00490
TBZ00118	TBZ00234	TBZ00311	TBZ00365	TBZ00396	TBZ00460	TBZ00491
TBZ00128	TBZ00235	TBZ00313	TBZ00366	TBZ00398	TBZ00461	TBZ00492
TBZ00129	TBZ00236	TBZ00316	TBZ00367	TBZ00399	TBZ00462	TBZ00493
TBZ00132	TBZ00237	TBZ00320	TBZ00368	TBZ00400	TBZ00464	TBZ00494
TBZ00201	TBZ00239	TBZ00328	TBZ00369	TBZ00401	TBZ00465	TBZ00495
TBZ00202	TBZ00240	TBZ00334	TBZ00370	TBZ00402	TBZ00466	TBZ00496
TBZ00203	TBZ00242	TBZ00335	TBZ00371	TBZ00403	TBZ00467	TBZ00497
TBZ00204	TBZ00244	TBZ00338	TBZ00372	TBZ00411	TBZ00468	TBZ00498
TBZ00205	TBZ00245	TBZ00341	TBZ00373	TBZ00413	TBZ00469	TBZ00499
TBZ00206	TBZ00247	TBZ00342	TBZ00374	TBZ00414	TBZ00470	TBZ00500
TBZ00207	TBZ00248	TBZ00344	TBZ00375	TBZ00421	TBZ00471	TBZ00501
TBZ00208	TBZ00249	TBZ00346	TBZ00376	TBZ00423	TBZ00472	TBZ00502
TBZ00209	TBZ00250	TBZ00347	TBZ00377	TBZ00424	TBZ00473	TBZ00503
TBZ00212	TBZ00251	TBZ00348	TBZ00378	TBZ00425	TBZ00474	TBZ00504
TBZ00214	TBZ00252	TBZ00349	TBZ00379	TBZ00428	TBZ00475	TBZ00505
TBZ00215	TBZ00253	TBZ00350	TBZ00380	TBZ00429	TBZ00477	TBZ00506
TBZ00216	TBZ00254	TBZ00351	TBZ00381	TBZ00434	TBZ00478	TBZ00507
TBZ00217	TBZ00255	TBZ00352	TBZ00382	TBZ00437	TBZ00479	TBZ00508
TBZ00218	TBZ00256	TBZ00353	TBZ00383	TBZ00438	TBZ00480	TBZ00509
TBZ00221	TBZ00257	TBZ00354	TBZ00384	TBZ00439	TBZ00481	TBZ00510
TBZ00222	TBZ00258	TBZ00356	TBZ00385	TBZ00442	TBZ00482	TBZ00511
TBZ00223	TBZ00263	TBZ00357	TBZ00386	TBZ00445	TBZ00483	TBZ00512
TBZ00224	TBZ00264	TBZ00358	TBZ00387	TBZ00446	TBZ00484	TBZ00513
TBZ00225	TBZ00265	TBZ00359	TBZ00388	TBZ00447	TBZ00485	TBZ00514
TBZ00226	TBZ00266	TBZ00360	TBZ00389	TBZ00450	TBZ00486	TBZ00515
TBZ00227	TBZ00287	TBZ00361	TBZ00390	TBZ00451	TBZ00487	TBZ00517
TBZ00228	TBZ00292	TBZ00362	TBZ00391	TBZ00452	TBZ00488	
TBZ00229	TBZ00295	TBZ00363	TBZ00392	TBZ00456	TBZ00489	

Model TH514

TBW00103	TBW00107	TBW00111	TBW00115	TBW00119	TBW00123
TBW00104	TBW00108	TBW00112	TBW00116	TBW00120	TBW00124
TBW00105	TBW00109	TBW00113	TBW00117	TBW00121	
TBW00106	TBW00110	TBW00114	TBW00118	TBW00122	