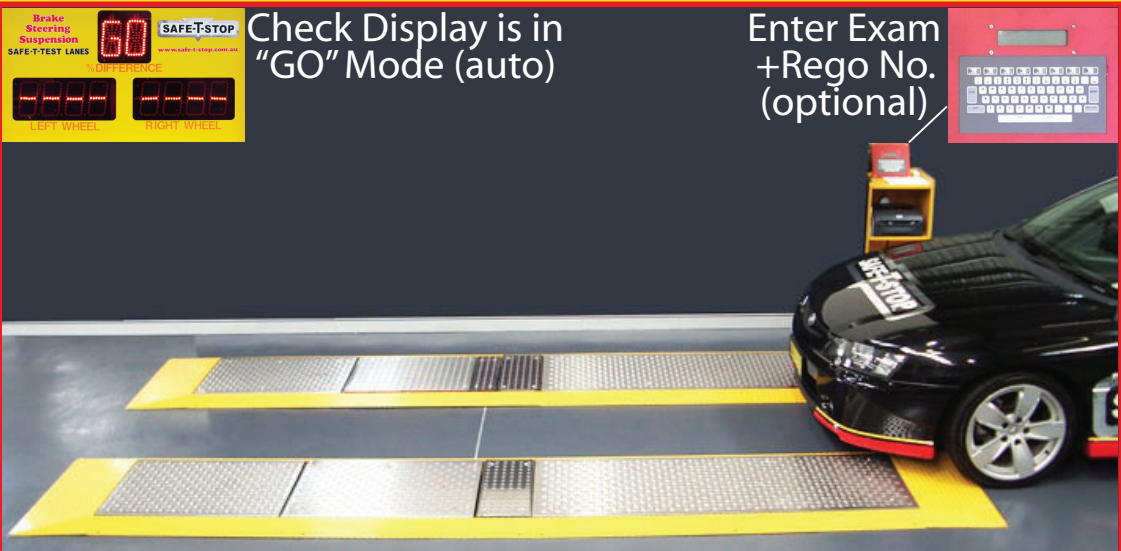


Easy as:

1



Check Display is in "GO" Mode (auto)  
Enter Exam +Rego No. (optional)

Line up vehicle – Pump brakes once – Check display  
Roll onto test lane at 5 km/h (walking pace)  
Transmission should be in neutral – do not move steering wheel

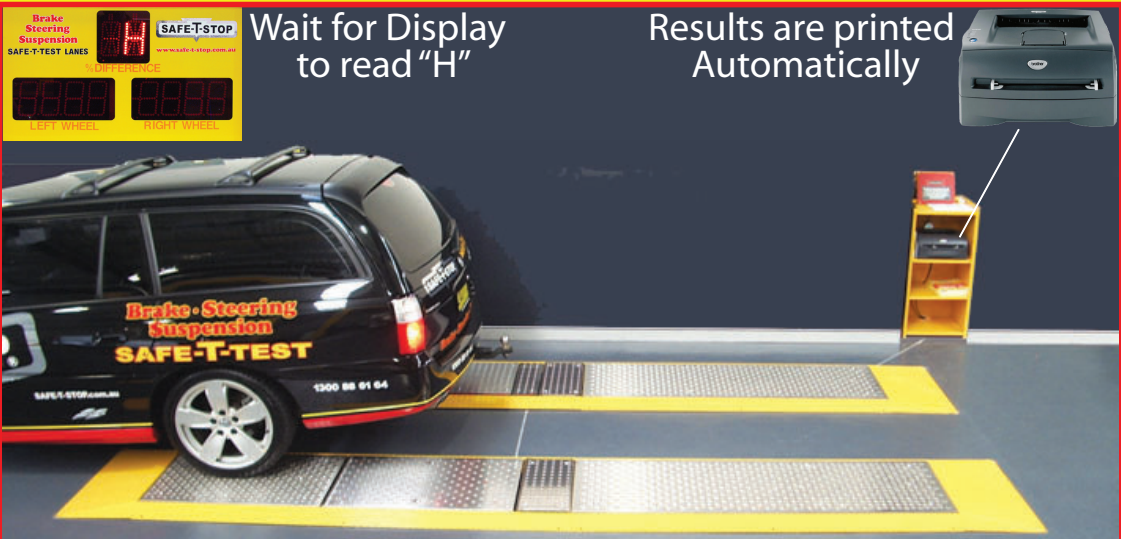
2



Display Reads: Front brake results - Max force in N  
Rear brake results - Max force in N  
Front Alignment results +/- mm in Toe/Drage

Once all 4 wheels are on the grip plates (photo)  
Push brake pedal firmly and keep pressed for 1 second  
Then wait until "H" appears on the display

3



Wait for Display to read "H"  
Results are printed Automatically

Roll forward and when rear wheels are on end grip plates pull handbrake gently  
Drive Off – Test Completed!



## Instruction Manual 'Ultima' 4 Plate Brake Test System

Brake and Steering Test Procedure	Page	2
Test Result – Pass / Fail Criteria	Page	3
How to Enter Numbers	Page	4
Shock Absorber Test Procedure	Page	5
Shock Absorber Test Results	Page	6
Weighbridge Functions	Page	7
Trouble Shooting	Page	8
Safe-T-Stop Test Track	Page	9
Safe-T-Stop Components	Page	10
Warranty Statement	Page	11
Record of Installation	Page	12
Calibration Certificate	Page	13
Calibration and Maintenance Record	Page	14

Workshop Solutions

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[info@platetronic.com](mailto:info@platetronic.com)

## BRAKE AND STEERING TEST PROCEDURE

**Step 1**      Stop Vehicle at least **ONCE** in forward motion before driving on to plates and ensure Overhead display reads: **GO**

**Step 2**      Roll onto Plates at 5 km/h ( walking pace )  
Car needs to be in neutral, do **NOT** steer as this can influence steering results.

**Step 3**      Once all four wheels are on the brake plates ( Large Plates )  
brake **HARD** and keep brake pedal pressed for 1 second.

The display now reads:

1. Maximum brake force in N & % difference on front axle.
2. Maximum brake force in N & % difference on rear axle.
3. Overall toe ( DRAG ) in mm on front axle.

**Step 4**      Wait for the display to read: **H**  
The PlateTronic is now ready for the handbrake test.

**Option A:**    Drive forward until rear axle is on front plates, then pull hand brake.

**Option B:**    Reverse off plates, wait for **H** to flash, drive forward and pull handbrake on whilst the vehicle rear axle is on rear plates. Drive forward over weighbridge to activate printout.

**Option C:**    On vehicles with front handbrake **ONLY**. Drive back off the plates **BEFORE H** is displayed. When **H** is displayed, drive onto plates and pull handbrake on whilst front axle is on front plates.

The test is now completed and the results are printed automatically.

The SAFE-T-STOP<sup>®</sup> is a precision instrument that simulates an actual emergency stop, a vital safety aspect that other brake test methods miss.



## TEST RESULTS - PASS / FAIL CRITERIA

### BRAKE TEST SPECIFICATIONS

Left to Right % difference front and rear axle:	Max 30%
Peak de-acceleration brake force in % G:	Min 60%
Avg de-acceleration brake force in % G:	Min 47%

**These are the only readings which influence Brake Test Pass / Fail.**

Front to Rear brake force distribution:	Front axle Min 60% Max 95%
	Rear axle Max 40% Min 5%

### WHEEL ALIGNMENT SPECIFICATIONS

PlateTronic measures the actual DRAG of the Tyres on the road surface.

#### Readings for best Tyre Wear are

Rear wheel drive cars:

Front Axle Alignment: 0mm to +3mm    Rear Axle Alignment: 0mm to +3mm

Front and 4WD cars:

Front Axle Alignment: - 1mm to +2mm    Rear Axle Alignment: 0mm to +3mm

### SHOCK ABSORBER SPECIFICATIONS

#### R1 = Rebound

70% or more is Hard / very good

60% is medium / acceptable

50% or less is soft / needs replacing

#### R2 = Oscillation

90% or more is Hard / very good

80% is medium / acceptable

70% or less is soft / needs replacing

These numbers are a guide line only, because you need to determine first if the car tested has got a hard, medium or soft ride quality as from the manufacturer, or as requested by the owner.



## HOW TO ENTER VEHICLE AND EXAMINERS NO

- Step 1** Aim Remote Control at Main Display and press the **1** button. This activates the keyboard.
- Step 2** At Keyboard choose from the keys **F1, F2, F3,** or **F4** which hold stored Examiners Numbers or Names. Then go straight to Step 3.
- Or
- Use the **F5** key which allows you then to enter your personal details (up to 8 characters)
- Then press **ENTER**.
- Step 3** Enter Vehicle Registration Number (Up to 8 characters)
- Then press **ENTER**
- Useful Hint** The **F7** key is used as the backspace key.
- These details are now stored for three minutes.

## HOW TO USE THE PEDAL FORCE METER

- Step 1** Clamp foot unit safely onto brake pedal.
- Step 2** Switch remote control to **ON**. A red light on hand unit will confirm battery power. Now follow normal test procedures

**DO NOT FORGET TO SWITCH OFF WHEN FINISHED**

## CODES FOR REMOTE

- M 1** Settings for the print Header. (AIS No, Serial No, Workshop Address)
- M 2** Factory settings - can only be accessed via Pass word.
- M 3** Weighbridge functions
- M 4** Automatic Brake and Alignment Test Program. (Normal Setting.)
- M 5** Print last Test
- M 6** Calibration Check
- C 1** Front Left Brake Plate
- C 2** Front Right Brake Plate
- C 3** Rear Left Brake Plate
- C 4** Rear Right Brake Plate
- LS** Static Weighbridge Left Side
- RS** Static Weighbridge Right Side
- C 6** Pedal Force Meter
- C 7** Dynamic Weighbridge
- C 8** Alignment Plate



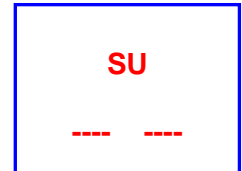
## SHOCK ABSORBER TEST PROCEDURE

**Caution** It is recommended to open both the **BONNET** and **BOOT** of the vehicle and to press on or near the strut. **DO NOT** press on the mudguard as this could dent the panels.

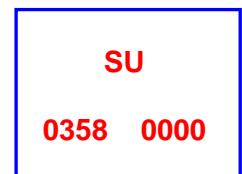
Correct Tyre pressure **IS** important.

**Step 1** Load pre printed stationary into printer.

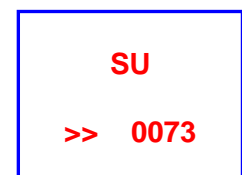
**Step 2** Press **4** on the remote control. Display panel now reads



**Step 3** Drive with front axle onto shock absorber test plates. Display will now show corner weights (approx 6 secs). During this time the driver should get out of the car. Countdown is now on from 9 – to – 0. During this time the vehicle needs to be stable (Do not touch) The right side of the display will now 'zero' itself and the right suspension test can begin.

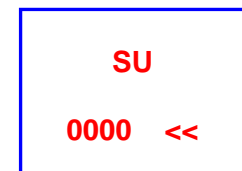


**Step 4** Press corner down sharply and release quickly. A minimum pressure of 70kg is necessary to activate the test. If successful, the display will show two arrows to the Right and the First Rebound measurement (**R1**) The measurement is displayed in percentage.



**Step 5** Once the arrows point to the left, the other side is ready to be tested by repeating the same procedure.

**Step 6** The display will now show the Rebound (**R1**) in % and Compression (**R2**) in



The higher the number on **R1** and **R2** the **BETTER** (harder) is the suspension dampening effectiveness.

**Step 7** Now drive the vehicle off, wait for display to read **RE**, and repeat on the rear axle.



**SAFETY TEST TRACK by WORKSHOP SOLUTIONS**

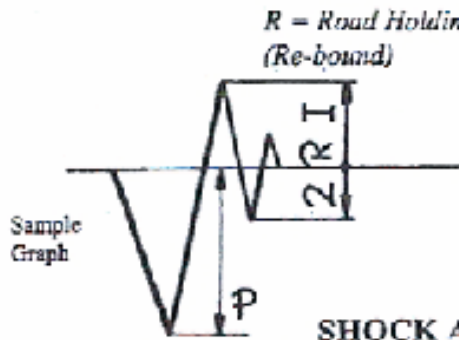
HUNTER HOLDEN  
603 VICTORIA RD RYDE NSW 2112  
PH 9808 9123 FAX 98074901

Date, Time : 10.09.1999 14:22  
AIS Nr. : A2454  
Serial Nr : 109J7104  
Next Cal : JUL 2002

VEHICLE Nr.: ADR 356

EXAMINERS Nr.: ELO388

SIGNATURE: 



The higher the % numbers achieved on R1 & R2, the better (harder) is the suspensions dampening effectiveness!

A high % Difference, means an unstable and potentially dangerous car!

**SHOCK ABSORBER TEST RESULTS**

<u>FRONT AXLE</u>			<u>SHOCK ABSORBER</u>		
<u>Left</u>	<u>Difference</u>	<u>Right</u>	<u>Good</u>	<u>Warn</u>	<u>Poor</u>
R1 = 58 %	00 %	56 %	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
R2 = 95 %	04 %	92 %	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<u>REAR AXLE</u>			<u>Comments:</u>		
R1 = 26 %	62 %	87 %	Rear Left Shock is inoperative!		
R2 = 91 %	04 %	94 %			

**WEIGHBRIDGE RESULTS in KG**

F/L Corner	F/R Corner	Front Axle
325	334	659
R/L Corner	R/R Corner	Rear Axle
200	186	386
Comments:		Total Vehicle Weight
		1045

## WEIGHBRIDGE FUNCTIONS

**Step 1** Aim remote control at display and press the **M** button until the display reads **M3** then press **E**.

The shock test plates are now in 'Weighbridge' Mode

**Step 2** Drive front axle onto weighbridge plates. Make sure car is parallel on test track and in the centre of the weighbridge sensors.

Now press **1** with remote control to store front axle weight.

**Step 3** Repeat for rear axle.

Press **2** with remote control to store rear axle weight.

**Step 4** Press **4** on remote control to start printing the results.

**Step 5** To exit, drive vehicle off plates, then press **E** on remote control twice.

**Useful Hint** With the remote, you can change between corner weights and total axle weight by pressing the **M** button.

- **1** will memorise the Front Axle weight
- **2** will memorise the Rear Axle weight
- **4** will print the results

This is not a certified public weighbridge.



## TROUBLE SHOOTING

Display shows **'GO'** but Safe-T-Stop is 'locked up'

Switch display off at power point for the duration of ONE MINUTE.

This will allow the computer to reset itself to original position.

Display shows **'PR'**

This means there is a printer problem.

Please check the following:

- Sufficient paper in paper drawer
- Toner cartridge needs replacing
- Paper jam has occurred

The printer warranty is covered by manufacturer. If the problem persists, please contact your nearest authorised Brother repairer.

Printer Details:        Brother Laser Printer  
                              Model Code HL-2070N

Brother Product Support  
Address:        7 Khartoum Road, North Ryde 2113  
Phone:         02 9887-4344



## SAFE-T-STOP ULTIMA 4 IN 1 SAFETY TEST TRACK

**Caution:** Maximum Load Capacity: Vehicles up to 4.5 tonne  
 NO forklifts or heavy trolleys allowed  
 Avoid walking on the plates as the alignment plate moves

**Test Speed:** 5 kph

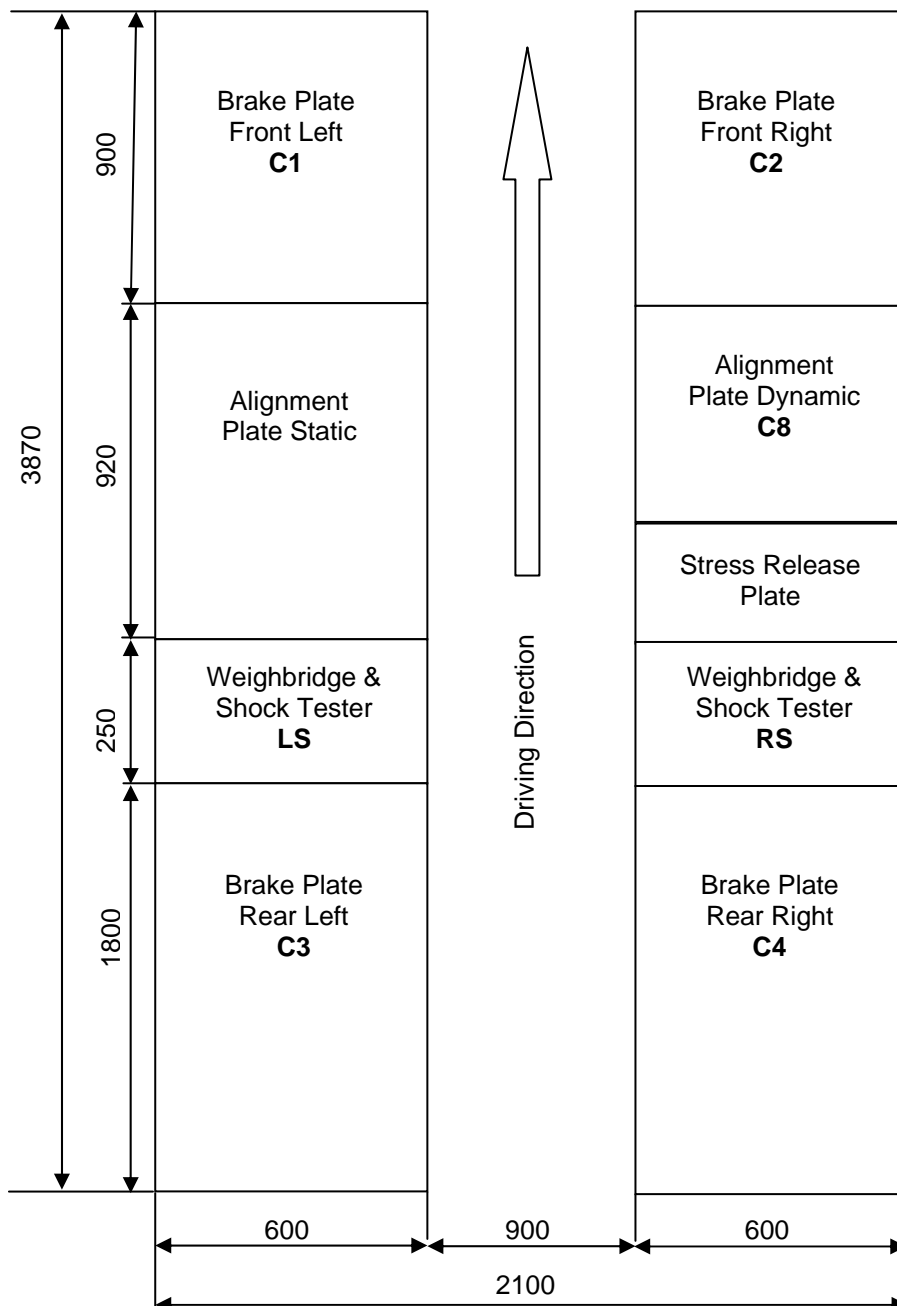
**Dimensions:** Above ground installation 2350W x 4670L x 50H  
 In ground installation 2100W x 3870L x 50D

**Skid Plates:** Stainless Steel plates, perforated for maximum grip

**Weight:** Approximately 550kg

**Shear Beam** Maximum Power Output: 12v

**Load Sensors:** Maximum Measuring Range: 1000kg  
 Maximum Load Capacity: 1500kg  
 Temperature Range: -10 / +50° C  
 Accuracy Class: ( + / - 0.1% )



## SYSTEM COMPONENTS



### Main Display

Dimensions: 600w x 350h x 250d  
 Sturdy steel casing  
 Large LED lights  
 Weight approximately 12 kg  
 Power input 240v output 12v



### Keyboard

Dimensions: 270w x 250h x 120d  
 Sturdy Steel casing  
 Weatherproof, washable surface.  
 Large LCD Display with light  
 Power output 12v



### Remote Control

Infra Red  
 1 x 9v battery



### Brake Pedal Force Meter

Radio controlled for easy use  
 2 x AA Batteries



### Printer

Brother HL-2070N  
 Laser Printer  
 20 ppm

## SAFE-T-STOP WARRANTY STATEMENT

The Safe-T-Stop Brake, Steering and Suspension Testing System installed by Workshop Solutions, is warranted against faulty workmanship and materials for a period of twelve (12) months from the installation date. Please note that load cells carry a three year warranty period.

### **Conditions**

The Safe-T-Stop must not be modified in any way or added to without the company's approval. It must be used under correct operating conditions.

4.5 tonne gross weight limit

No forklifts on plates

No trolley jacks or other equipment with steel or hard plastic or steel rollers or wheels pushed or driven over the plates.

### **Warranty Exclusions**

Damage caused by misuse, abuse or neglect

Damage from modifications or incorporating other parts

Damage resulting from an act of God

