# Snorkel
## NEW ZEALAND

# Operator's Manual

# SR2255
# SR2755

**Engine Powered**
**Diesel and Battery Electric**




Version II
P/N 12874A
December 2009 Rev B
From Serial Number NZ081037 Onwards

MidWestTech | Snorkel SR2255, SR2755 Scissor Lift Operator's Manual | Publication 1287... Order the manual at mid-west-tech.com >

**Electrical Hazard**

Electrical Hazard Warning . . . . . i
Minimum Safe Approach Distance . . . . . ii
Table 1 - (M.S.A.D.) . . . . . ii
Figure 3 - (M.S.A.D.) . . . . . ii

**Introduction**

Standard SR2255 / SR2755 . . . . . iii
Options . . . . . iii
Operation Manual . . . . . iii
Photographs . . . . . iii
Safety Alerts . . . . . iii
Operation . . . . . iv
Maintenance . . . . . iv
Responsibilities of parties . . . . . iv
In summary . . . . . iv
Additional information . . . . . v

**1. Safety**

Safe Operation . . . . . 1-1
Electrocution Hazards . . . . . 1-1
Minimum safe approach distance . . . . . 1-1
Pre-start Inspection . . . . . 1-2
Work Place Inspection and Practices . . . . . 1-2
Operation . . . . . 1-3
Tipover and Falling Hazards . . . . . 1-3
General Safety Precautions . . . . . 1-3
Hydraulic System Precautions . . . . . 1-3
Fire Prevention . . . . . 1-4
Engine and Fuel Handling Precautions . . . . . 1-4
Batteries . . . . . 1-4
Safety Decals and Placards . . . . . 1-4
Safety Placards and Decals Location . . . . . 1-5

**2. Safety Devices**

Safety Device Information . . . . . 2-1
Emergency Stop Switches . . . . . 2-1
At platform control box . . . . . 2-1
At ground control box . . . . . 2-1
Alarms . . . . . 2-1
Level sensor . . . . . 2-2
Lowering . . . . . 2-2
High temperature . . . . . 2-2
Low oil pressure . . . . . 2-2
Drive (reverse) . . . . . 2-2
Drive (forward) . . . . . 2-2
Guardrails . . . . . 2-2
Safety Prop . . . . . 2-2
Swinging Gate . . . . . 2-3
Safety Control . . . . . 2-3
Bubble Level . . . . . 2-3
Operator Horn . . . . . 2-3
Stabilisers . . . . . 2-3
RCD/ELCB AC Outlet (option) . . . . . 2-4
Flashing Light . . . . . 2-4
Lanyard Anchor Points (option) . . . . . 2-4

**3. Specifications**

Specifications . . . . . 3-1
General Specifications, Standard Machine SR2255 . . . . . 3-1
General Specifications, Standard Machine SR2755 . . . . . 3-2
Machine Component Identification . . . . . 3-3
Recommended Hydraulic Oil . . . . . 3-3

**4. Gauges**

Water Temperature . . . . . 4-1
Amps . . . . . 4-1
Engine Oil . . . . . 4-1
Hydraulic Oil Level . . . . . 4-1
Diesel Fuel Level . . . . . 4-1
Hours . . . . . 4-2
Bubble Level . . . . . 4-2

**5. Automatic Shut-offs and Circuit Breakers**

Automatic Shut-offs . . . . . 5-1
Level sensor . . . . . 5-1
Engine oil pressure . . . . . 5-1
Engine temperature . . . . . 5-1
Platform height vs. drive speed . . . . . 5-1
Dynamic brakes . . . . . 5-1
Alternator not charging . . . . . 5-1
Stabilisers . . . . . 5-1
Circuit Breakers . . . . . 5-1
Main breaker . . . . . 5-1
RCD / ELCB outlet (option) . . . . . 5-1

**6. Controls**

Controls . . . . . 6-1
Hydraulic Compartment . . . . . 6-1
Ground Control Box . . . . . 6-1
Platform Control Box . . . . . 6-2

**7. Daily Inspection and Maintenance**

Daily Inspection and Maintenance Table . . . . 7-1
Fuel Level . . . . . 7-2
Fuel Filter . . . . . 7-2
Fuel Leaks . . . . . 7-2
Engine Oil . . . . . 7-2
Engine Coolant . . . . . 7-2
To add coolant: . . . . . 7-3
Swinging Gate . . . . . 7-3
Wiring Harnesses and Connectors . . . . . 7-3




MidWestTech | Snorkel SR2255, SR2755 Scissor Lift Operator's Manual | Publication 1287... Order the manual at mid-west-tech.com >

# Table of Contents


Batteries . . . . . 7-3
Battery Terminals . . . . . 7-3
Battery Fluid Level . . . . . 7-4
Hydraulic Oil Tank . . . . . 7-4
Hydraulic tank cap . . . . . 7-4
Hydraulic oil level . . . . . 7-4
Hydraulic Oil Leaks . . . . . 7-4
Tires and Wheels . . . . . 7-4
Bolts and Fasteners . . . . . 7-5
Structural Damage & Welds . . . . . 7-5
Guardrails . . . . . 7-6
Bubble Level . . . . . 7-6
Guides, rollers, and slides . . . . . 7-6
Charging System . . . . . 7-6
Ground Controls . . . . . 7-7
Flashing Light . . . . . 7-7
Platform Controls . . . . . 7-7
Emergency Lowering . . . . . 7-7
RCD / ELCB (Option) . . . . . 7-8
Safety prop . . . . . 7-8
Lanyard Anchorages (Option) . . . . . 7-8
Non-Slip Tread Grip . . . . . 7-8
Wrist Support . . . . . 7-9
Placards and Decals . . . . . 7-10
Standard placards and decals . . . . . 7-10
Inspection drawing . . . . . 7-11

**8. Operation**

Operating Procedures . . . . . 8-1
Control Stations . . . . . 8-1
Emergency Stopping . . . . . 8-1
Operation Considerations . . . . . 8-1
Operating From The Ground Control Box . . . 8-2
Raising the platform . . . . . 8-2
Operating From The Platform Control Box . . . 8-3
Driving . . . . . 8-4
Raising the Platform . . . . . 8-4
Stabilisers . . . . . 8-5
Operating The Stabilisers Manually . . . . . 8-5
To set the stabilisers . . . . . 8-5
To raise the stabilisers: . . . . . 8-6
Operating The Auto Level System . . . . . 8-6
Setting the stabilisers automatically . . . . . 8-6
Raising the stabilisers automatically . . . . . 8-6
Extending The Multi-Position Platform . . . . . 8-7

**9. Emergency Operation**

Emergency Operation Procedures . . . . . 9-1
Emergency Stop . . . . . 9-1
Emergency Bleed-Down . . . . . 9-1
Pushing / Towing . . . . . 9-2

**10. Stowing and Transporting**

Stowing . . . . . 10-1
Transporting . . . . . 10-1
Trailering . . . . . 10-1
Securing to a Transport Vehicle . . . . . 10-2
Towing . . . . . 10-2
Lifting / Lashing Down . . . . . 10-2
Pushing . . . . . 10-3
Winching Procedure . . . . . 10-3

**11. Options**

Bi-Energy Option . . . . . 11-1
DC motor . . . . . 11-1
DC motor operation . . . . . 11-1
Master battery isolater switches . . . . . 11-1
Steering in DC motor mode . . . . . 11-2
Batteries . . . . . 11-2
Battery charger . . . . . 11-2
Batteries - General maintenance . . . . . 11-3
Batteries - Charging . . . . . 11-3
Other Options . . . . . 11-3
Lanyard Anchor Points . . . . . 11-3
Non-Marking Tyres . . . . . 11-3
RCD / ELCB Outlet . . . . . 11-3
Electrical Outlet . . . . . 11-4

**12. Fire Fighting and Chemical Containment**

Hazardous Components . . . . . 12-1
Antifreeze (UN 1993) . . . . . 12-1
Battery, Lead/Acid (UN 2794) . . . . . 12-1
Diesel Fuel (NA 1993) . . . . . 12-1
Foam In Tires . . . . . 12-2
Gasoline (UN 1203) . . . . . 12-2
Hydraulic Oil (UN 1270) . . . . . 12-3
Liquefied Petroleum Gas (UN 1075) . . . . . 12-3
Motor Oil (UN 1270) . . . . . 12-3

**13. Operator's Troubleshooting**

Troubleshooting . . . . . 13-1
Operator Troubleshooting Chart . . . . . 13-1

**Appendix A. Glossary**





MidWestTech | Snorkel SR2255, SR2755 Scissor Lift Operator's Manual | Publication 1287... Order the manual at mid-west-tech.com >

## ■ Specifications

The SR2255 / SR2755 series machines are scissor-supported elevating work platforms built to conform to the following standards. OSHA Paragraph 1910.67 Title 29, C.F.R., Vehicle-Mounted Elevating and Rotating Work Platforms - Labour.OSHA Paragraph 1926.556 Title 29, C.F.R., Aerial Lifts - Construction.Australian Standard AS1418-10(Int) Elevating Work Platforms.

## ■ General Specifications, Standard Machine SR2255

| SPECIFICATIONS | | SR2255 | |
|---|---|---|---|
| Nominal working height | Wheels | 8.1m | 26' 7" |
| | Stabilisers | 8.5m | 27' 11 " |
| Platform floor height | Wheels | 6.1m | 20' |
| | Stabilisers | 6.5m | 21' 4" |
| Roll out deck size | | 1200mm | 47" |
| Drive speed | Below 2.4m | 0 to 5.2kph | 0 to 3.3mph |
| | Above 2.4m | 0 to 0.64kph | 0 to 0.4mph |
| Safe working load (Roll out deck NOT extended) | Main deck | 420kg | 925lbs |
| Safe working load (Roll out deck extended) | Main deck | 300kg | 661lbs |
| | Roll out deck | 120kg | 265lbs |
| Platform size | | 2.73 x 1.4m | 8' 11" x 4' 7" |
| Stowed height | Hand rails up | 2.35m | 7' 8" |
| | Hand rails folded down | 1.55m | 5' 1" |
| Overall length | | 3.3m | 11' 0" |
| Overall width | | 1.45m | 4' 9" |
| Gradeability | | 35% | |
| Lift time | | 24 - 29 seconds | |
| Lower time | | 40 - 42 seconds | |
| Turning radius | Inner | 2.5m | 8.2' |
| | Outer | 4.75m | 15.6' |
| Maximum wind speed | 12.5m/s | 45km/h | 28mph |
| Insulation rating | | Nil | |
| Tyres | Poly filled loader lug | 23" x 8.9" x 12" | |
| Overall weight | | 2360kg | 5202lbs |
| Ground clearance | Minimum | 170mm | 7" |
| | Mid cabinet | 260mm | 10.2" |
| Maximum sound level at platform | | 86db | |



MidWestTech | Snorkel SR2255, SR2755 Scissor Lift Operator's Manual | Publication 1287... Order the manual at mid-west-tech.com >

At the start of each work day (or 8 hour shift), an SR qualified operator must perform the Daily Inspection and maintenance (or Pre-Operation Inspection as it is sometimes referred to), as listed in the table below.

The purpose of the Daily Inspection and Maintenance is to keep the SR in proper working condition and to detect signs of malfunction at the earliest possible time.

Set the Key Switch to OFF before you begin this inspection.

Defective parts and/or equipment malfunctions jeopardize the safety of the operator and other personnel, and can cause damage to the machine.

## ⚠DANGER

**DO NOT operate an SR that is known to be damaged or malfunctioning.**

**Repair all equipment damage or malfunctions, before placing the SR into service**

## ■ Daily Inspection and Maintenance Table

| Item | Service Required |
|---|---|
| Fuel level | Visually inspect |
| Fuel filter | Visually inspect (condition) |
| Fuel leaks | Visually inspect (hoses and connections etc) |
| Engine oil | Check oil level (between dipstick lines) |
| Engine coolant | Check fluid level |
| Radiator cap | Visually inspect (installation) |
| Swinging gate | Visually inspect (installation, operation) |
| Wiring harnesses and connectors | Visually inspect (installation, operation) |
| Battery terminals | Visually inspect (no corrosion) |
| Battery fluid level | Visually inspect (covers plates) |
| Hydraulic tank cap | Visually inspect installation) |
| Hydraulic oil level | Check fluid level (at line on side of tank) |
| Hydraulic oil leaks | Visually inspect (hoses,tubes) |
| Tires and wheels | Visually inspect (condition) |
| Bolts and fasteners | Visually inspect (looseness) |
| Structural damage and welds | Visually inspect (welds, cracks, dents) |
| Guardrails | Visually inspect (condition) |
| Lanyard anchorages (option) | Visually inspect (condition) |
| Bubble level on platform | Visually inspect (condition) |
| Guides, rollers and slides | Visually inspect (condition) |
| Non slip tread grip | Visually inspect (condition) |
| Wrist support | Visually inspect (condition) |
| Placards, decals, and Operators Manual | Visually inspect (installation and condition) |
| **START THE ENGINE FROM THE GROUND CONTROL BOX** | |
| Charging system | Check condition (gauge) |
| Ground controls | Actuate and visually inspect for operation |
| Emergency lowering | Check operation (causes correct motion) |
| Platform controls | Actuate and visually inspect for operation |
| Flashing light | Visually check (operation) |
| RCD / ELCB (option) | Check operation |
| Air filter | Check condition |
| Safety prop | Check operation |
| | |



MidWestTech | Snorkel SR2255, SR2755 Scissor Lift Operator's Manual | Publication 1287... Order the manual at mid-west-tech.com >

## ■ Ground Controls



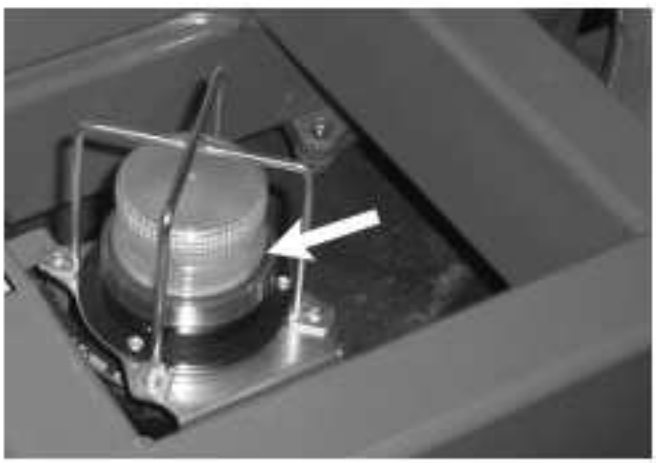

**Figure 7.25 - Ground Controls**

Check the Platform Lift/Lower switch ❶ (see Figure 7.25) to see that it is functioning properly by holding the switch up to rise platform and pushing the switch down to lower the platform.

Pay particular attention to the Emergency Stop switch ❷ (see Figure 7.25) to see that it turns the SR engine off when struck.

## ■ Flashing Light

Check to see that the light flashes approximately once a second when the SR engine is running.



**7.26 - Flashing Light**

## ■ Platform Controls

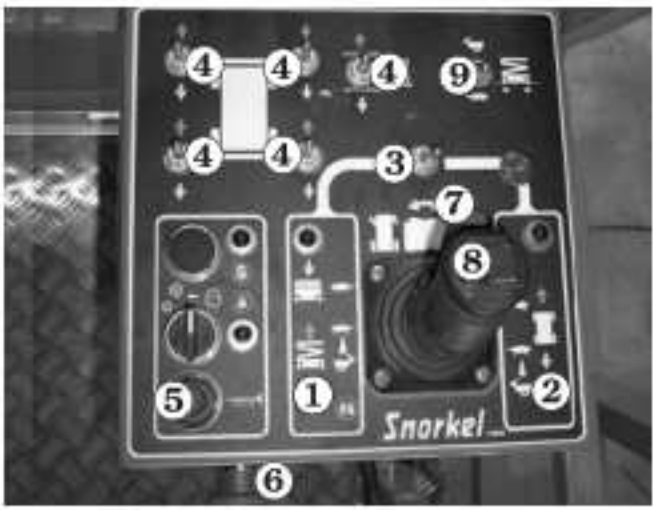



**Figure 7.27 - Platform Controls**

Check all of the lift ❶, drive ❷, steer ❸, speed ❾, and stabiliser ❹ functions from the platform control box to see that they cause the SR to move the way it should (see Figure 7.27). (for correct operating procedures see the Operation chapter ).

Listen for the lowering alarm while the platform is going down. Listen for the motion alarm while the SR is being driven forward. Listen for the back-up alarm while the SR is backing up.

Press the operator horn ❺ (see Figure 7.27) to see that it works.

Pay particular attention to the **Emergency Stop** switch ❻ to see that it turns the engine off when struck (see Figure 7.27).

Pay particular attention to the **Safety Control** ❼ to see that it deactivates the **Joystick Controller** ❽ when the safety control ❼ is released (see Figure 7.27).

## ■ Emergency Lowering




**Figure 7.28 - Emergency Lowering**



MidWestTech | Snorkel SR2255, SR2755 Scissor Lift Operator's Manual | Publication 1287... Order the manual at mid-west-tech.com >

## FRONT END OF SR

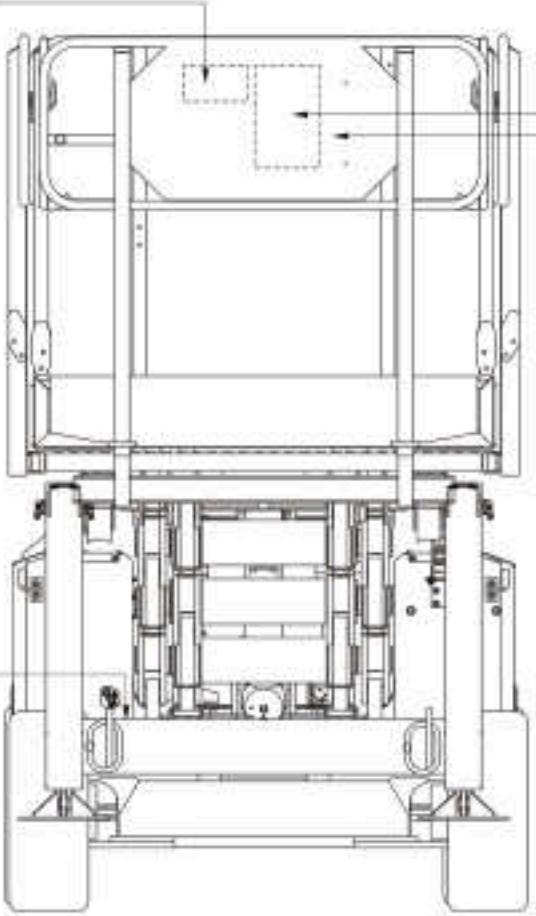



Australia Only




New Zealand Only



ALL DECALS ON REVERSE SIDE OF PANEL

On Top Of Chassis Member






MidWestTech | Snorkel SR2255, SR2755 Scissor Lift Operator's Manual | Publication 1287... Order the manual at mid-west-tech.com >




Figure 9.8

2. At the ground control box set the EMERGENCY STOP switch ❷ to off, turn the MAIN POWER switch ❸ off and remove the key ❹ (see Figure 9.8).

---

➜ **IF YOUR MACHINE HAS A SERIAL NUMBER BEFORE NZ081001 THEN FOLLOW STEPS 3 TO 5**

➜ **IF YOUR MACHINE HAS A SERIAL NUMBER BETWEEN NZ081001 AND NZ091031 THEN FOLLOW STEPS 6 TO 8**

➜ **IFYOUR MACHINE HAS A SERIAL NUMBER NZ091101 OR HIGHER THEN FOLLOW STEPS 9 TO 11**

---

3. Inside the hydraulic compartment, open the free-wheeling valve ❺ by turning counterclockwise until the knob stops (see Figure 9.9).




Figure 9.9

## ⚠DANGER

**A runaway SR can cause death or serious injury. At the next step the SR brakes will be released. Do not proceed to the next step unless the SR is on a level surface or the SR is securely attached to another vehicle that has the capacity to safely control the SR on a grade.**

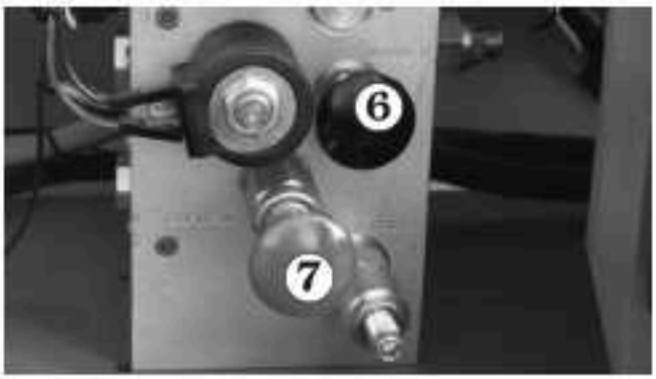



Figure 9.10

4. To release the brakes, pump the hand pump ❼ 5 - 10 times (see Figure 9.10). The brakes will now be released and the SR is ready to be pushed or towed.

## ⚠CAUTION

**The SR drive motors will be ruined if the SR is pushed (or pulled) faster than 2 mph (3.2 km/hr). Unless personnel safety considerations dictate otherwise, do not push (or pull) faster than 2 mph (3.2 km/hr).**

5. Once the unit has been safely pushed / towed, pull the re-set knob ❻ to re-apply the brakes (see Figure 9.10) and close the free-wheel valve ❺ (see Figure 9.9).

The SR is now ready for normal operation.

---

6. Inside the hydraulic compartment, open the free-wheeling valve ❺ by turning counterclockwise until knob stops.(see Figure 9.11).




Figure 9.11



MidWestTech | Snorkel SR2255, SR2755 Scissor Lift Operator's Manual | Publication 1287... Order the manual at mid-west-tech.com >