

# DOOR LIFTING GEAR AP350

Maximum Door Weight: 159kg (350lbs)

This door gear has been designed for quick and easy installation. Through careful design it is possible to adjust the door after installation for very smooth operation. To obtain these benefits read the instructions RIGHT through BEFORE installation

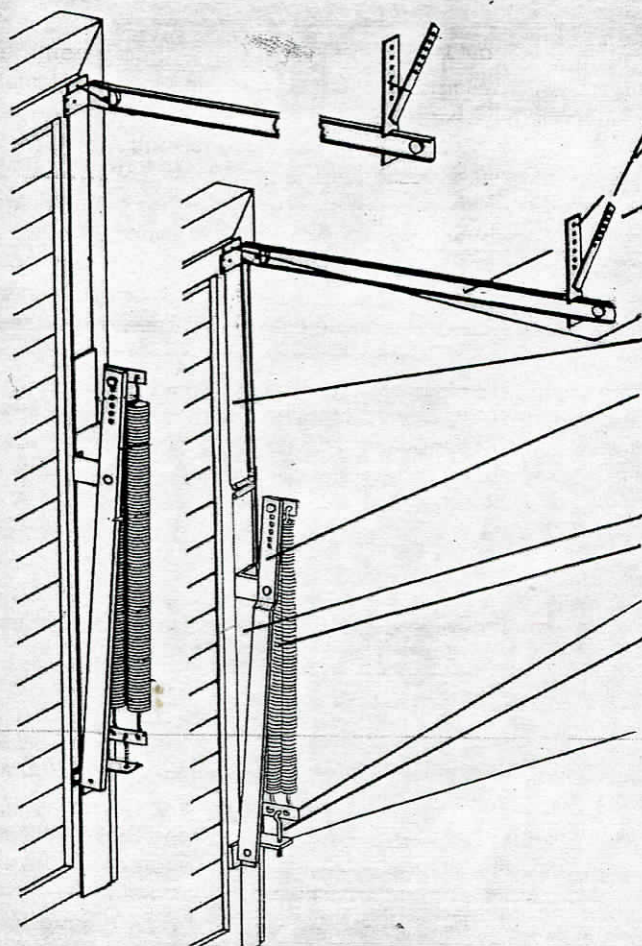
## CAUTION

ALWAYS raise and prop the door in the open position before fitting, adjusting or removing the springs

All instructions are given from within the garage

NOTE. Although a confident D.I.Y person should be able to carry out this work we recommend that you engage the services of a specialist installer

Firstly unpack and identify the parts (right hand assembly shown)



## Description

Track stabiliser bracket	4 off
Track support bracket	4 off
Track with track bracket and rubber buffer	2 off
M10 Washers	4 off
M10 x 30 Hex sets and nuts	2 off
Top roller bracket	2 off
Top weather strip	2 off
Activating arm with spring anchor pin fitted	2 off
Top roller spindles	2 off
Circlips	4 off
Bottom weather strip	2 off
Springs	4 off
Bottom spring anchor plate	2 off
Spring anchor bolt	2 off
M12 nuts	4 off
M12 washers	2 off
Spring anchor bracket	2 off
Screw Pack	
M10 x 60 Hex head coachscrews	6 off
M10 Washers	12 off
M8 x 40mm Hex head coachscrews	18 off
No 12 x 3/4" self tapping screws	20 off
M8 x 20mm Hex head nuts, bolts and washers	4 off
M8 x 60 Hex head coachscrews	4 off
M8 Washers	26 off
M10 x 90 coachbolts	6 off



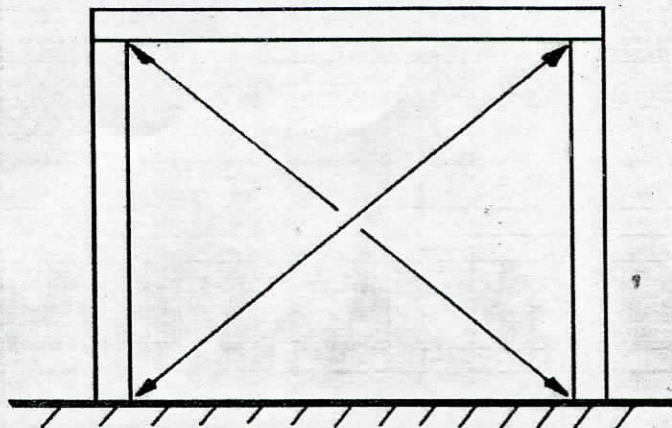
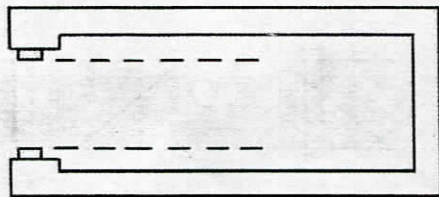
## STEP 1 FRAME DETAILS

Recommended timber frame size 70mm x 70mm

Minimum frame size 50mm x 70mm

Frame must be square, check diagonals

Frame must also be square with opening

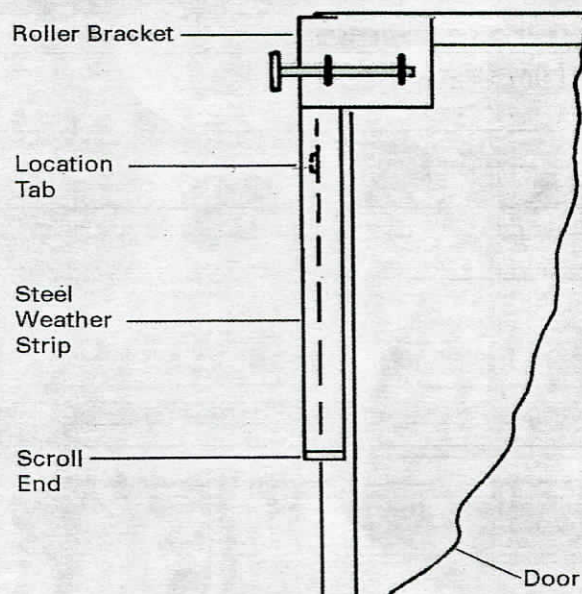
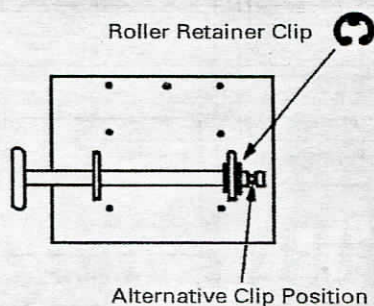


## STEP 2 FIT TOP ROLLERS AND WEATHER STRIPES

GO STRAIGHT TO STEP THREE IF TOP ROLLER BRACKETS AND WEATHER STRIPS ARE PREFITTED

Locate the top roller bracket flush with the top of the door matching the same overhang as the top weather strip. On doors OVER 50mm (2") thick, lower the top roller bracket by the same amount. I.e. door thickness 62.5mm (2 1/2") lower the bracket by 12.5mm (1/2"). Fix the roller bracket and weather strip using No. 12 x 3/4" self tapping screws.

TAKE GREAT CARE NOT TO DRILL RIGHT THROUGH THE DOOR FACE



## STEP 3 POSITION DOOR IN OPENING

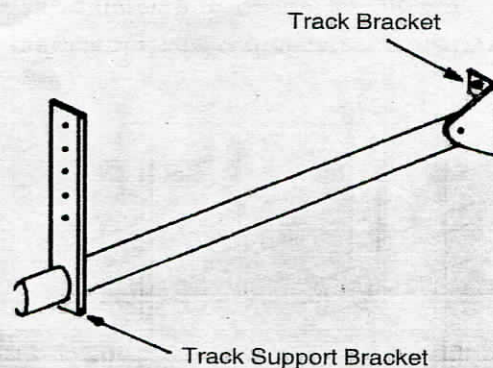
Wedge the door in the opening and allow 10mm side clearance, 10mm clearance between the top of the door and the header and allow at least 10mm ground clearance.



## STEP 4 INSTALL THE TRACKS

Locate the track over roller, support rear of the track allowing between 25mm and 40mm fall to the rear.

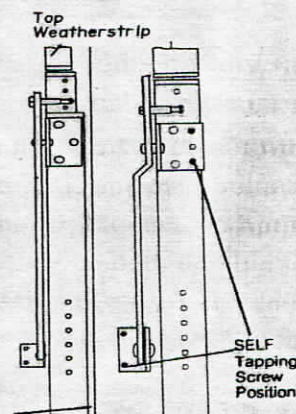
With the track **JUST TOUCHING** the bottom of the roller drill 2 x 6mm pilot holes in the middle of the slots in the track brackets. Fix using 2 x M8 x 60 coachscrews.



Slide on track support bracket and fasten to a suitable support using 1 x M8 x 40mm coachscrew and washer ensuring track is square to door and allowing fall as above. Fit rubber buffer by drilling 9mm hole in track and secure with M8 x 30mm bolt / nut / washer as fitted. Position rubber buffer towards rear of track but not so far as to allow door arm to hit spring anchor bolt. Door must stop against rubber buffer not arm against anchor bolt.

## STEP 5 INSTALLATION OF ACTIVATING ARMS

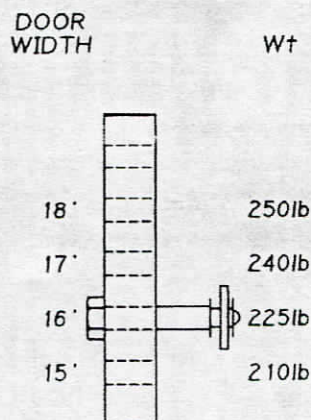
Locate and fix bottom weather strip allowing 3mm (1/8") gap. Using 4 No.12 x 3/4 self tapping screws. Locate activating arm vertically onto bottom weather strip and fit 2 M10 x 90mm (10mm hole) coachbolts through holes in activating arm bracket. Do not tighten yet. Fit bottom activating arm bracket ensuring that the arm does not foul the bottom weather strip. Drill two 6mm pilot holes so that the 2 off M8 x 40mm coachscrews fit in the holes.



**TAKE CARE NOT TO DRILL RIGHT THROUGH THE DOOR**

## STEP 6 INSTALLATION OF SPRINGS

OPEN door and prop it firmly in the fully open position. The top spring anchor is fitted. If needed reposition it according to the guide shown. This may save time on spring adjustment later. Locate springs over top spring anchor plate then assemble bottom spring anchorplate over bottom springs. Locate spring anchor bolt over spring anchor plate. Fix anchor bracket using 1 x M10 x 90mm coachbolt in top hole (10mm hole) and 1 x M10 x 60mm coachscrew in other hole (pilot hole 7mm) in the position that allows the spring anchor bolt just to go through the bracket. Tighten spring 25mm





## STEP 7 Track Supports

Remove the prop and the door should be touching both buffers. If the door is only touching one buffer adjust the tracks, i.e. from behind the door if the left hand buffer is not touching the door move both tracks to the right. When the door is square fasten middle track supports and 4 track stabiliser brackets

## STEP 8 Door Balance

If the door closes too easily :

Prop the door in the fully open position then remove spring anchor pin DOWN one hole, be sure to retighten pin fully, repeat both sides

If the door is hard to close :

Prop the door in the fully open position then remove spring anchor pin UP one hole, be sure to retighten pin fully, repeat both sides

Fine Adjustment can be carried out by adjusting the spring anchor bolts equally on both sides

## STEP 9 Door Adjustment

The door should now be working in a satisfactory manner however, after installation the door can drop slightly check:

Is the gap between the top and bottom weather strips still 3mm (1/8). If not SLIGHTLY loosen the Coachscrews/nuts in the bottom activating arm bracket and raise door to achieve gap, then retighten.

Are the top roller brackets touching the bottom of the tracks? If not adjust front track brackets and retighten

Is the door clear of the frame during opening and closing? If not check first that tracks are square, see STEP 7. If door still catches frame adjustment can be obtained by adjusting door brackets, loosen coachscrews/nuts SLIGHTLY adjust then retighten.

In order to prevent the top weather strips damaging soft timber frames a pair of rubbing strips are included these should be fitted with the centre of the rubbing strip placed over the top weather strip contact point ( this contact will be different on a manual door to one fitted with an operator )

Note:- Adjustment will not overcome incorrect fitting, great care should be taken to ensure that your door frame is square and the door is square. Also activating arms are vertical and true to each other

## STEP 10 OILING THE DOOR GEAR

For smooth running of the door it is important to oil the moving parts

1. The four pivot on the activating arms
2. The roller Wheels
3. The Top spring attachments

Adjust springs only when the door is in the open position. Before removing springs or spring anchor brackets use a prop to securely keep the door in the open position. Release the spring tension by unscrewing adjustment nuts

**NOTE: ALL ADJUSTMENTS MUST BE ONLY CARRIED OUT WITH THE DOOR FIRMLY PROPPED IN THE FULLY OPEN POSITION**

70 x 70 Fin timber goalpost in the opening  
filled in between brick / underneath lintel.

