

# Lotus Europa TC Disc Conversion Details

## Caliper Specification

The calipers fitted to HTU35K for rear disc conversion were as fitted to the European version of the Renault Scenic

Description	Brake Caliper
Position	Trailing
Type	Lucas
Brake Disc	Solid 11 mm
Piston	1 x 34 mm diameter

Cable operated parking brake mechanism.

Renault, Scenic (1999-2003), 1.4 Petrol, MPV, 16v	07/1999-07/2003	Rear
Renault, Scenic (1999-2003), 1.6 Petrol, MPV, 16v	07/1999-07/2003	Rear
Renault, Scenic (1999-2003), 1.8 Petrol, MPV, 16v	07/2000-07/2003	Rear
Renault, Scenic (1999-2003), 1.9 Diesel, MPV, FWD, dTi, 8v	07/1999-04/2000	Rear
Renault, Scenic (1999-2003), Diesel, MPV, FWD, dCi, 8v	04/2000-07/2003	Rear
Renault, Scenic (1999-2003), 2.0 Petrol, MPV, FWD, 16v	07/1999-07/2003	Rear

The calipers require 2 bolts each to mount on the car, the fixed caliper mounts are threaded metric M12. I bought four high tensile M12x40mm bolts, 1.25 fine pitch threads and cut them to suit.



**Renault Scenic 1999-2003 Rear Calipers**  
**Lucas Trailing Caliper. Solid 11mm Disc. 1x34mm piston**

Fig 1

## Disc Specification

The discs fitted to HTU35K for the rear disc conversion were as fitted to the European version of the MGF.

Brake Disc Type	Solid
Brake Disc Thickness	10mm
Minimum Thickness	8mm
Centering Diameter	66mm
Brake Disc Diameter	240mm
Height	43mm
Stud PCD	95mm (M12 studs)



Fig 2

## Handbrake Cable

The standard Lotus cable consists of a single wire cable with two sections of outer covering going from the chassis to rear drums. The outer casings are both 49" long, and the inner wire 120". (dimensions are approximate.) This will work with the new calipers but as the adjuster on mine was already more than half way, I decided to make a custom cable. I did this by purchasing a handbrake cable as follows;

Quinton Hazell Number BC2147

Vehicle Applications: Vauxhall

ASTRAMAX - 1.3 N (1985 - 1989) 44 kw | 60 HP | 1297 cc  
ASTRAMAX - 1.3 S (1985 - 1989) 55 kw | 75 HP | 1297 cc  
ASTRAMAX - 1.4 i (1991 - 1994) 44 kw | 60 HP | 1389 cc  
ASTRAMAX - 1.4 S (1989 - 1991) 55 kw | 75 HP | 1389 cc  
ASTRAMAX - 1.6 i (1991 - 1994) 55 kw | 75 HP | 1598 cc  
ASTRAMAX - 1.6 (1985 - 1991) 60 kw | 82 HP | 1598 cc  
ASTRAMAX - 1.6 D (1986 - 1990) 40 kw | 54 HP | 1598 cc  
ASTRAMAX - 1.7 D (1989 - 1994) 42 kw | 57 HP | 1700 cc

This has an inner wire of 3130mm and two outer casings of slightly differing lengths, but the shortest is still equal to the OEM Europa one. The intention was to use this as a basis for a custom cable.

## Materials & Tools Required

I have only a basic workshop and used the following tools

Workbench with 6" heavy duty vice  
Assorted hammers, punches and hand files  
4" angle grinder with grinding and cutting discs  
6" Bench grinder  
Manual metal arc (stick) welder with 2mm rods  
Assorted clamps to hold things in place for welding  
Digital Vernier calipers & 2 spirit levels

In addition I had some 6mm mild steel plate for the brackets, 4mm plate for modifying the handbrake cable mount on the calipers, 8mm round bar stock for the cable nipples and 2mm welding rods. You could use 3mm rods but lower sizes tend to mean less heat input and hopefully less distortion. It's also slower welding....