**Incorrect or out of phase engine timing can result in damage to the valves. The Tool Connection cannot be held responsible for any damage caused by using these tools in anyway.**

## Safety Precautions – Please read

- Disconnect the battery earth leads (check radio code is available)
- Remove spark or glow plugs to make the engine turn easier
- Do not use cleaning fluids on belts, sprockets or rollers
- Always make a note of the route of the auxiliary drive belt before removal
- Turn the engine in the normal direction (clockwise unless stated otherwise)
- Do not turn the camshaft, crankshaft or diesel injection pump once the timing chain has been removed (unless specifically stated)
- Do not use the timing chain to lock the engine when slackening or tightening crankshaft pulley bolts
- Do not turn the crankshaft or camshaft when the timing belt/chain has been removed
- Mark the direction of the chain before removing
- It is always recommended to turn the engine slowly, by hand and to re-check the camshaft and crankshaft timing positions.
- Crankshafts and Camshafts may only be turned with the chain drive mechanism fully installed.
- Do not turn crankshaft via camshaft or other gears
- Check the diesel injection pump timing after replacing the chain
- Observe all tightening torques
- Always refer to the vehicle manufacturer's service manual or a suitable proprietary instruction book
- Incorrect or out of phase engine timing can result in damage to the valves
- It is always recommended to turn the engine slowly, by hand, and to re-check the camshaft and crankshaft timing positions

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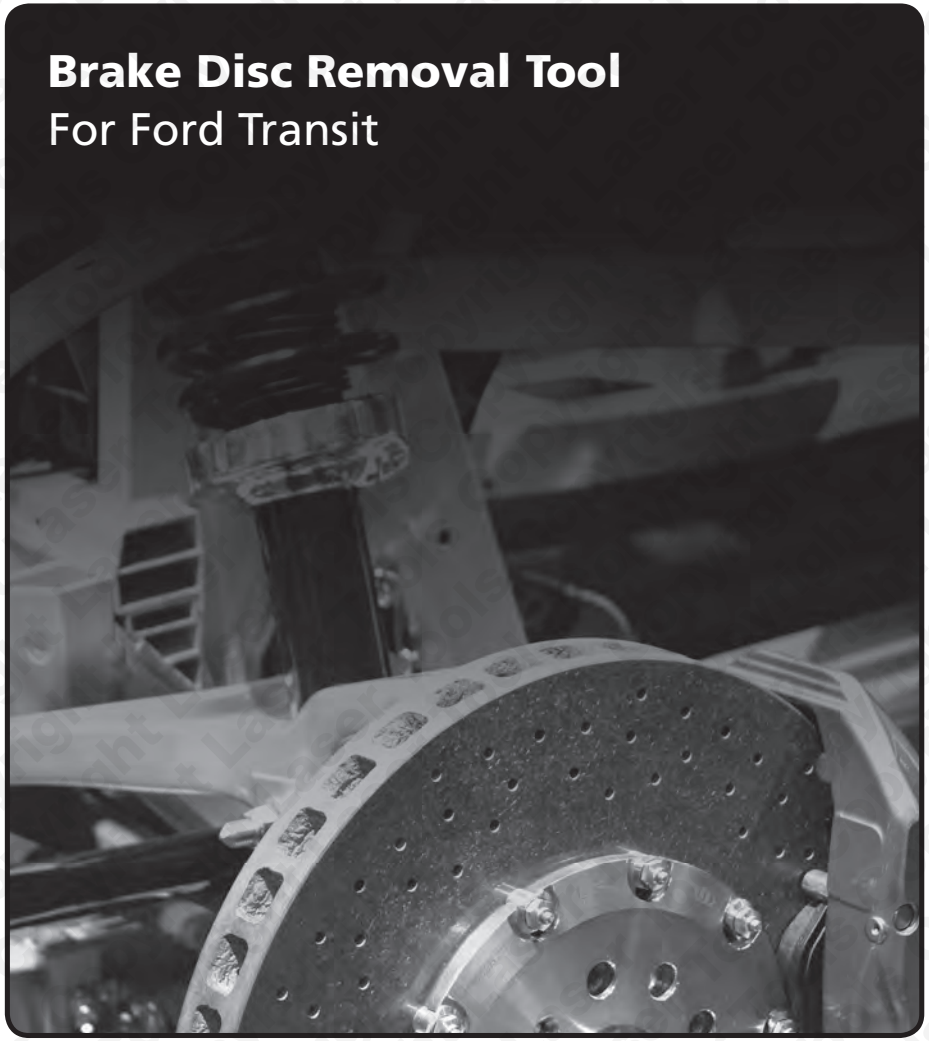
LASER®

Part No. 4288

# Brake Disc Removal Tool
## For Ford Transit



## Brake Disc Removal Tool – Ford Transit

OEM Part No 204-345B

Suitable for the removal and installation of brake discs on front and rear wheel drive vehicles.

## PREPARATION

**Other requirements for the job**
Two leg puller (Laser Part No 3850)

### FWD New

- Cotter pin.
- halfshaft retaining nut.
- lower ball joint retaining nut.

NOTE: Vehicles are equipped with a lower arm ball joint nut with a flat diameter of either 24mm or 30mm (Check before starting this procedure)

### RWD New

- Cotter pin.

### Instructions for removal

1. Remove the halfshaft (FWD) spindle (RWD) retaining nut locking ring and discard the cotter pin.
2. Loosen the halfshaft retaining nut (FWD) wheel spindle retaining nut (RWD).
3. Remove the wheel complete with tyre as described in the relevant work shop manual.
4. Detach the brake calliper and anchor plate from the wheel knuckle.
5. Suspend the brake calliper and anchor plate to prevent load being placed on the brake hose.

### FWD

1. Remove the halfshaft retaining nut and washer.
2. Loosen the lower ball joint (FWD).
3. Protect the ball joint seal using a soft cloth to prevent damage.
4. Using a suitable two leg puller, detach the lower arm from the wheel knuckle.



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5. Use a soft faced hammer to strike the lower arm.
6. Remove and discard the retaining nut.
7. Support the halfshaft. The inner joint must not be bent more than 21 degrees. The outer joint must not be bent more than 45 degrees.
8. Using the two leg puller, detach the halfshaft from the wheel hub and secure it to one side.
9. Remove the wheel hub and brake disc assembly retaining bolts.
10. Using the wheel hub retaining bolts install the special tool making sure the cut out is aligned with the wheel speed sensor.
11. Install the halfshaft retaining nut to the special tool.
12. Remove the wheel hub and brake disc assembly by tightening the retaining bolts in the sequence in the diagram (FIG 1).
13. Remove the special tool.
14. Remove the brake disc retaining bolts.
15. Using a press and drift, remove the brake disc.
16. Apply high temperature grease to the matting surfaces of the wheel bearing housing and the wheel knuckle.

### Precautions – always:

- Install a new lower arm ball joint retaining nut.
- Install a new halfshaft retaining nut.
- Install a new cotter pin.

**TO INSTALL: REVERSE THE PROCEDURE**

NOTE: Use the old halfshaft retaining nut to pull the halfshaft onto the wheel hub.

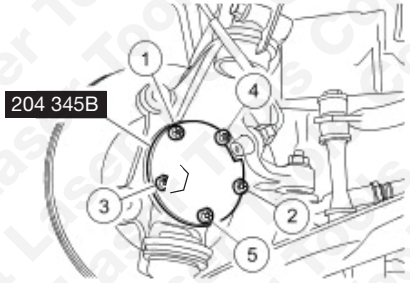
Make sure the ball joint ball does not rotate

### RWD

1. Remove the wheel spindle retaining nut and washer.
2. Remove the wheel hub and brake disc assembly retaining bolts.
3. Make sure that the special tool cut out is aligned with the wheel speed sensor.
4. Attach the wheel spindle retaining nut and install the special tool.
5. Tighten the retaining bolts in the sequence shown in diagram.
6. Remove the special tool.
7. Remove the brake disc retaining bolts.
8. Using a suitable press and drift, remove the brake disc.

NOTE: Apply high temperature grease to the matting surfaces of the wheel bearing housing and the wheel knuckle. Install a new cotter pin.

**TO INSTALL: REVERSE THE PROCEDURE**



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