

Tuesday, 9th January, 2024**PRODUCT ENGINEERING BULLETIN****MY22 FTR and FV* with EBS: Installing
Heavy Trailer Towing Equipment
(Update 6)**

1. MY22 FV* and FTR models were launched in 2022 with a new Electronic Braking System (EBS) with Electronic Stability Control (ESC) functionality (EBS + ESC). The EBS + ESC system used by Isuzu is supplied by Knorr-Bremse, a German brake system specialist.



This Bulletin is a sixth update to Isuzu Dealer Portal Bulletin 095/22 ENG published on 18 May 2022, and to Bulletin 057/23 ENG originally published on 6 April 2023.

2. **A reminder:** The MY22 FTR and FV range are sold to market from Isuzu **without towing equipment**; if any of these chassis are to be equipped for towing heavy trailers (that is, with ATM > 4,500 kg) the EBS + ESC requires signals to be communicated to and from the heavy trailer using an appropriate Trailer Control Valve and TCV Module.

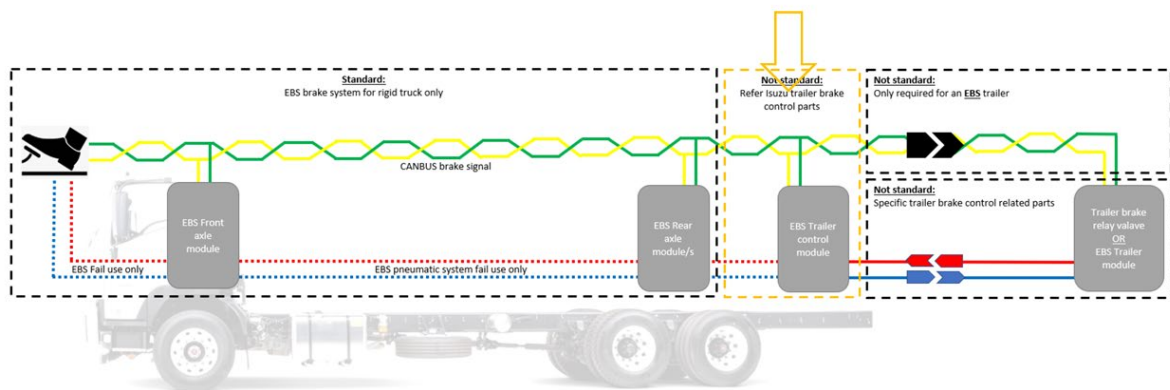
WARNING:

Fitment of an aftermarket TCV and/or module not specifically designed to operate with a Knorr-Bremse EBS + ESC braking system may lead to unsafe truck and trailer characteristics in certain situations. The Isuzu / Knorr-Bremse EBS is designed to be programmed (via G-IDSS service tool) to recognise the genuine TCV and module and adjust its operation accordingly.

3. Isuzu Australia Limited (IAL) is pleased to advise that we have now successfully fitted Isuzu / Knorr-Bremse TCV and TCVM components to all applicable MY22 FTR and FV models, using a locally developed kit that uses many Isuzu-sourced parts.

4. **NOTE:** Validation and certification through the VSB6 Heavy Vehicle Modification Code and approval from an Approved Vehicle Examiner (AVE) is still required when this kit is fitted, resulting in a Heavy Vehicle Modification Plate being fitted to the truck. VSB6 requires that AVEs should refer to the vehicle OEM when setting up towing equipment on vehicles with advanced braking systems (such as EBS + ESC). Therefore, it is very important that your AVE consults all available information issued by IAL, including the

contents of this bulletin, before approving a towing installation.



DESIGN and SUPPLY of GENUINE TCV Kits

5. Bartlett Integrated Towing Solutions (BITS) has been contracted by IAL to design and build completed kits, ready for installation by dealers or their sub-contractors. The individual components of these kits are NOT sold to dealers separately, only as a complete trailer connection solution. The normal order and supply process via the IAL Parts Warehouse commenced in late 2023, with the availability of a dedicated FTR kit.

KIT PART NUMBER AND COST / PRICING

6. Dealer Cost and List Price for the completed kits (including equalised freight) to suit MY22 FTR, FVR, FVD, FVZ, FVY and FVL models is now established, with kit part numbers as below:

Part number **92958961 - KIT;TRAILER CONTROL VALVE (TCV), MY22 FTR**

Rec List Price = \$4,436.08 + GST

Available to order IAL Warehouse: Now

Part number **92958860 - KIT;TRAILER CONTROL VALVE (TCV), MY22 FVR/D.**

Rec List Price = \$4,657.88 + GST

Available to order IAL Warehouse: Now

Part number **92958871 - KIT;TRAILER CONTROL VALVE (TCV), MY22 FVZ/Y & FVL**

Rec List Price = \$4,657.88 + GST

Available to order IAL Warehouse: Now

7. The kits described above includes provision of detailed installation instructions, including details in using the G-IDSS Service tool to recognise the TCV and TCVM when installed correctly. An **FTR** kit is now complete, with specific instructions reflecting that model's different axles, brake components, chassis frame and component location

LIGHT TRAILERS

8. If setting up EBS-equipped MY22 models for use with Light Trailers only (i.e. ATM is up to 4,500 kg), an electric brake system is required, and **this bulletin is not applicable**.

Please note that IAL is working with another supplier to develop an F-Series “Plug and Play” Electric Trailer Brake kit, similar to that already available for N Series models. For now, a reputable aftermarket kit such as REDARC Tow Pro is recommended for this purpose. Please also note that light trailers must have a breakaway system installed if ATM is above 2,000 kg.

Installation Instructions

9. BITS and IAL have developed a set of comprehensive installation instructions for the TCV Kits. It is important to note that a critical part of kit installation is to re-program the EBS Module using the G-IDSS Service Tool. **G-IDSS reprogramming will require a “one day password” to be issued via your Zone Service Manager.** How to enable the new program to recognise the TCV kit is included in the instructions. Latest draft instructions are attached to this Bulletin, and are subject to ongoing improvement, so please always refer to latest version. Please note that brake system plumbing varies between models, so there are Instructions for FTR kit, FVR/D kit, and also for FVZ/Y & FVL models.

NOTE for Authorised Vehicle Examiners (AVEs) and VASS / Engineering Signatories:

10. In the case of vehicles with fully pneumatic brake operation it has been conventional practice for the trailer control valve (TCV) to have control air signal inputs from both the front and rear axle air brake circuits. The latest specification FV* and FT* models however are equipped with a Knorr supplied EBS (Electronic Braking System). In the case of models with EBS when the system is operating normally the TCV determines the control signal air output to the trailer based on what it receives as an electronic signal from the foot pedal. As designed by Isuzu Motors Limited (IML) /Knorr the air supply to the TCV is taken from the primary (rear axle) air circuit and the spring brake air supply circuit. There is no input from the front brake air circuit as has been common practise in the past.

ADR 35/06 features the following clause:

5.5.9. Every motor vehicle which provides its ‘Secondary Braking System’ by means of a ‘Split Service Brake System’ and which is equipped to tow a trailer which uses air at positive pressure, must be so equipped that the operation of the ‘Secondary Brake System’ causes a control signal proportional to the degree of braking to be present in the ‘Control Line 35/...’.

11. This clause has caused some confusion amongst AVEs when referencing MY22 Isuzu trucks with EBS. Although FV* and FT* models are fitted with a “Split Service Brake System” secondary braking is NOT provided by means of the split service brake system. The secondary brake system for these models is homologated as being the **spring emergency brakes** and so therefore clause 5.5.9 is not applicable. In the event of failure of either the front or rear air circuits of the vehicle the secondary brake system is still operational. There is **no requirement** for one half of a split circuit brake system to be able to apply the trailer brakes under brake failure conditions.

Modifications Performed Beyond the Genuine TCV Kit

12. The Genuine Kits described in this Bulletin have followed strict guidelines set by Isuzu Motors Limited (Japan) and also Knorr-Bremse, the EBS system supplier. They have also been tested to ensure compliance to ADRs when installed as instructed. **Additional valves or other components to address any perceived functionality requirements are used entirely at the risk of the modifier / selling dealer.** If there is an operational need to re-arrange mounting location of some air tanks or other components, then installers are requested to ensure the air system diagram functionality is maintained.

Further Local Developments

13. IAL and BITS will continue with further development (subject to final approval from Isuzu Japan engineers) with the end goal of supplying optimised “plug and play” kits that address some in-service concerns, while maintaining ADR compatibility for all applicable MY22 FV* and FTR models.

14. Thank you once again for your patience in this matter. Orders can now be placed in the normal way through IAL parts for complete kits suitable for all relevant MY22 models. Current warehouse stock of kits appears to be suitable for current market requirements, and will be replenished as required. However, demand patterns can take 1-2 years to be established, so dealers are encouraged to only order immediate kit requirements for their stocks.

Yours faithfully,



Simon Humphries

Chief Engineer,
MD & HD Product Manager

Attachments:

1. MY22 FVR/D Trailer Control Valve Kit Installation Instructions
(Rev2 31Jul23)
2. MY22 FVZ/Y & FVL Trailer Control Valve Kit Installation Instructions
(Rev2.1 11Oct23)
3. MY22 FTR Trailer Control Valve Kit Installation Instructions
(Rev 2.1 9Jan24)