

C1/19469/TC/2009

Transport Commissionerate, Kerala
Trans Towers, Thiruvananthapuram
Dated: 22-07-2011

From

The Transport Commissioner

To

All Deputy Transport Commissioners
All Regional Transport Officers
All Joint Regional Transport Officers

Sir,

Sub: Motor Vehicles Department-Approval of retrofitted/adaptation kit for Differently abled persons for using in M1 Category Non Transport Vehicles-reg

Ref: Certificate No.ARAI/HMR/CMVR-CORR/11-12/21 dated 07-06-2011 issued by the Automotive Research Association of India

Your attention is invited to the above reference. Vide reference cited, the Automotive Research Association of India had given approval to the retrofit/adaptation kit invented by Sri.Biju Varghese, Purayidathil House, Venkurinji, Mukkoottuthara, Kottayam-686510 for Differently abled persons for using in the following models (M1 Category-Non-Transport Vehicles only)

Sl No	Vehicle Manufacturer	Vehicle Model/Variants (Manual Transmission)
1	Maruti Suzuki India Ltd	Maruti Wagon R Std., Maruti Esteem, Maruti Zen Std., Maruti Zen Std.-Estilo, Maruti Alto, Maruti Ritz, Maruti Swift, A-Star, Maruti Swift Dzire, Baleno, Grand Vitara
2	Hyundai Motor India Ltd	i10, i20, Santro, Verna, Sonata, Accent, Getz
3	Toyota Kirloskar Motor Private Ltd	Toyota Corolla, Toyota Innova, Etios, Altis
4	Honda Sael Cars India Ltd	Jazz, City, CR-V, Civic
5	Mahindra & Mahindra Ltd	Logan, Verito
6	General Motors India Pvt Ltd	Chevrolet Spark, Chevrolet Aveo, Beat, U-VA, Chevrolet Captiva, Chevrolet Cruze
7	Tata Motors Ltd	Tata Indica, Tata Indigo, Tata Indica Vista, Nano, Aria, Tata Indigo Manza
8	Fiat India Automobiles Ltd	Fiat Palio, Fiat Uno, Punto, Linea, Fiat Petra
9	Hindustan Motors Ltd	Lancer, Montero
10	Skoda Auto India Pvt Ltd	Yeti, Fabia, Octavia, Laura
11	Ford India Pvt Ltd	Ford Fusion, Ford Ikon, Fiesta, Figo
12	Volkswagen	Polo
13	Nissan	Micra

The approval was issued with reference to the letter No.RT-11012/12/2001-MVL dated 29-05-2009 issued by Ministry of Shipping, Road Transport & Highways, Department of Road Transport & Highways, Government of India. It may be noted that the above referred vehicle models, when fitted with retrofit kit, are intended for operation on road by Differently able persons.

All the Registering Authorities and Additional Registering Authorities are directed to verify the above while registering the vehicles subject to the compliance of letter No.RT-11012/12/2001-MVL dated 29-05-2009 issued by Ministry of Shipping, Road Transport & Highways, Department of Road Transport & Highways, Government of India and subsequent directions. You are also directed to verify the compliance of provisions of Act and Rules other than those mentioned in the ARAI Certificate.

The applicant is directed to produce the copy of ARAI test report for each vehicle at the time of inspection of vehicle fitted with these speed governors. The details of ARAI Certificates are being communicated to your office by E-mail. You are also requested to make sure that the registered owner of the altered vehicle is Differently abled person.

Yours faithfully
Sd/-
Senior DTC (Taxation)
For Transport Commissioner

Copy to: Sri.Biju Varghese, Purayidathil House, Venkuringi, Mukkoottuthara,
Kottayam-686510

Approved for issue

Senior Superintendent

Handwritten signature in blue ink: Biju Varghese
Handwritten signature in brown ink: [unclear]

AF AI/HMR/CMVR-CORR/11-12/21

Date: June 07, 2011

To,

Mr Biju Varghese
Purayadathil House,
Venkuringi, Mukkoottuthara,
Kottayam (Via), Kerala - 686 510

Dear Sir,


With reference to the letter No. RT-11012/12/2001-MVL dt. 29th May 2009, (issued by Ministry of Shipping, Road Transport & Highways, Dept. of road Transport & Highways, Govt. of India), ARAI has carried out the necessary inspection and testing on four wheelers (retrofitted/adapted with the kit for physically challenged persons) submitted by you.

It is stated that the said adaptation is found suitable for following vehicle models (M1 Category-Non-Transport Vehicles only):

Sr. No.	Vehicle manufacturer	Vehicle Model / Variants (Manual Transmission)
1.	Maruti Suzuki India Ltd.	Maruti Wagon R Std., Maruti Esteem, Maruti Zen Std., Maruti Zen Std.-Estilo, Maruti Alto, Maruti Ritz, Maruti Swift, A-Star, Maruti Swift Dezire, Baleno, Grand Vitara
2.	Hyundai Motor India Ltd.	i10, i20, Santro, Verna, Sonata, Accent, Getz
3.	Toyota Kirloskar Motor Private Ltd.	Toyota Corolla, Toyota Innova, Etios, Altis
4.	Honda SIEL Cars India Ltd.	Jazz, City, CR-V, Civic
5.	Mahindra & Mahindra Ltd.	Logan, Verito
6.	General Motors India Pvt Ltd	Chevrolet Spark, Chevrolet Aveo, Beat, U-VA, Chevrolet Captiva, Chevrolet Cruze
7.	Tata Motors Ltd.	Tata Indica, Tata Indigo, Tata Indica Vista, Nano, Aria, Tata Indigo Manza
8.	Fiat India Automobiles Ltd	Fiat Palio, Fiat Uno, Punto, Linea, Fiat Petra
9.	Hindustan Motors Ltd.	Lancer, Montero
10.	Skoda Auto India Pvt. Ltd.	Yeti, Fabia, Octavia, Laura
11.	Ford India Pvt. Ltd.	Ford Fusion, Ford Ikon, Fiesta, Figo
12.	Volkswagen	Polo
13.	Nissan	Micra

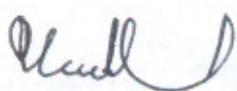
We are enclosing herewith Report No. VEL/H18-10630/2011-12/065 dt. 06.06.2011 for your perusal.

CAUTION: The above referred vehicle models, when fitted with retrofitment kit, are intended for operation on road by physically challenged person.


Mrs. RASHMI URDUWASHESHE,
SR. DEPUTY DIRECTOR,
HOMOLOGATION MANAGEMENT & REGULATION,
ARAI, PUNE



AUTHORISED SIGNATORY,


SHRIKANT R. MARATHE,
DIRECTOR,
ARAI, PUNE.

VEHICLE EVALUATION LABORATORY

TEST REPORT
APPROVAL OF RETROFITMENT / ADAPTATION KIT FOR FOUR WHEELED VEHICLE FOR
PHYSICALLY CHALLENGED PERSON
MARUTI SWIFT VDI (Reg No. KL 03 T 6030)
Passenger Car

Engine No. : D13A1462898

Retrofitter : Shri. Biju Varghese (Car owner)

Chassis No. : MA3FKEB1S00599884

Test Site : ARAI, Pune

Reg. No. : KL 03 T 6030

Clause No.	Description	Remark
1.0	OBJECTIVES	
	To provide safe mobility to a person having lower limb physical disability	Provision of seating comfort for a person having lower limb physical disability for safe mobility ensured.
	To standardize modifications in the four wheeled vehicles (M1 category) to make them suitable for a specific type of disability	Retro fitment is carried out on passenger car model "Maruti Swift VDI" (M1 category). The retrofitted vehicle was also assessed by a physically challenged person (having lower limb disability) for performance requirements of the retro fitments / modifications carried out.
2.0	POSSIBLE MODIFICATIONS IN THE VEHICLE (M1 category)	
	Modifications to be carried out would solely depend upon the type and nature of physical disability of a person. Usually these modifications would involve shifting/ relocation/ adaptation of foot controls and/ or hand controls.	Modification/ retro fitment checked and ascertained persons with impairment in both legs and are found to be effective and commendable.
	Vehicle with manual transmission as well as with automatic transmission may be considered for carrying out modifications. Details regarding type of disability, vehicle selection, recommended solution for retro fitment/ adaptation, etc are given in Annexure A of draft approval procedure under reference	Modification/ retro fitment checked on "Maruti Swift VDI" (M1 Category), with manual transmission, involving hand operated driving control for Clutch, Gearshift, Brake and Accelerator, which is most suitable for persons afflicted with lower limb physical disability, and are observed to be satisfactory and in compliance to requirements of Annex-A of Draft Procedure.

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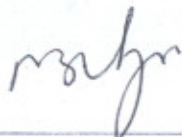

Clause No.	Description	Remark
3.0	APPROVAL OF RETRO FITMENT/ ADAPTATION KIT	
3.1	Application for Approval	
	Kit manufacturer shall submit the already type approved vehicle model fitted with recommended retro fitment / adaptation kit along with technical information as per details given in Annexure B of draft approval procedure under reference.	Modifications / Retro fitment has been carried out on Registered Vehicle (Registration No. KL 03 T 6030) and retro-fitment / adaptation kit used is verified to be in line with technical specifications, as laid down under Annex-B of Draft Procedure.
4.0	PERFORMANCE REQUIREMENTS	
4.1	Functional Brake Test	
	Vehicle shall be driven on a normal city road at 50 kmph speed (as indicated on speedometer). Service brake shall be applied and the stopping behavior of the vehicle shall be checked. During this test, the vehicle shall not show any instability or unsafe condition	Compliance verified. Vehicle was driven beyond speed of 50 km/h and it is observed that vehicle does not display any signs of instability or unsafe condition during functional brake testing. Braking force required is observed to be around 15 N.
4.2	Functional Gradeability Test	
	The vehicle shall be driven on the gradient such as city fly over. While negotiating the gradient, brakes shall be applied. The vehicle shall not skid and roll back. There shall be provision of applying and releasing parking brake. On release of brake, the vehicle shall be able to easily climb the gradient	Compliance verified. Vehicle was able to negotiate gradient on ARAI approach road. Functional performance of Accelerator / Brake / Clutch adaptation kit system, during this trial, was observed to be excellent.
4.3	Functional Steerability Test	
	The vehicle shall be able to negotiate the steering course as per figure of '8'.	Compliance verified. Observed excellent maneuverability during normal driving as well as negotiating steering course as per figure of '8'
4.4	Accessibility and Operational Functionality of Hand Controls	
	Accessibility and operational functionality of various hand controls for the devices such as head lamps, direction indicators, horn, wind screen wiping system etc. Shall be checked.	Ease in accessibility verified. Control are well within reach of hand and easy to operate

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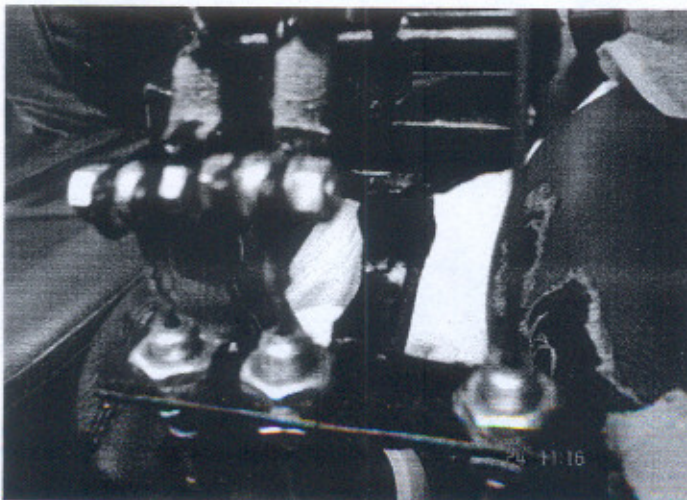
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Clause No.	Description	Remark	
4.5	Identification Symbol The vehicle shall carry following symbol on the front and rear, indicating that the vehicle is meant for driving by a handicapped person. The symbol shall be made up of retro-reflective material (tape)	Symbol provided at both front and rear windshield.	
4.6	Failure mode analysis as submitted by the installer shall be examined	The installer information on failure mode is very limited, with respect to clutch. However, failure of mechanical linkages is physically seen from outside, prior to boarding the vehicle. Since no major dynamic failure is observed, the probability of failure is only solenoid valve and hence clutch assistance. In such a case, the vehicle will not operate at all.	
5.0	APPROVAL OF WORKSHOPS FOR THE FITMENT OF APPROVED KIT		
	The kit manufacturer shall identify the workshops, which shall carry out the fitment on his behalf. This shall be done on the basis of : - Competence - Availability of necessary of equipments - Experience in the relevant field. - Trained manpower etc.	This clause was not examined as per owners information, he himself has retrofitted kit with his own workshop and taken responsibility of fitment.	
Remarks : The retrofitted "Maruti Swift VDI" passenger car complies with the requirement, viz. Clause Nos. 1 to 5 of the Draft Procedure approved in the 21st CMVR-TSC meeting held in June 2007 & communicated to Ministry of Road Transport & Highways (MoRT&H)			
06-06-2011			
DATE	S.S. CHINCHWADE TECHNICAL ASSISTANT	P.D. BETGERI ASSISTANT DIRECTOR	 A.A. BADUSHA DEPUTY DIRECTOR & HEAD

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Photographs

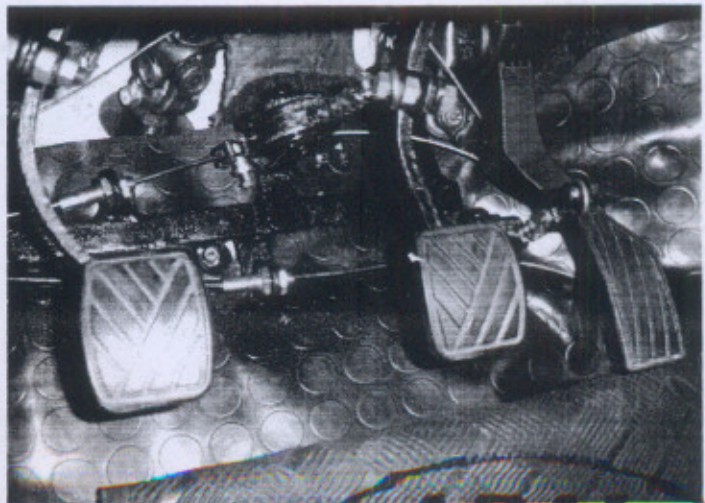
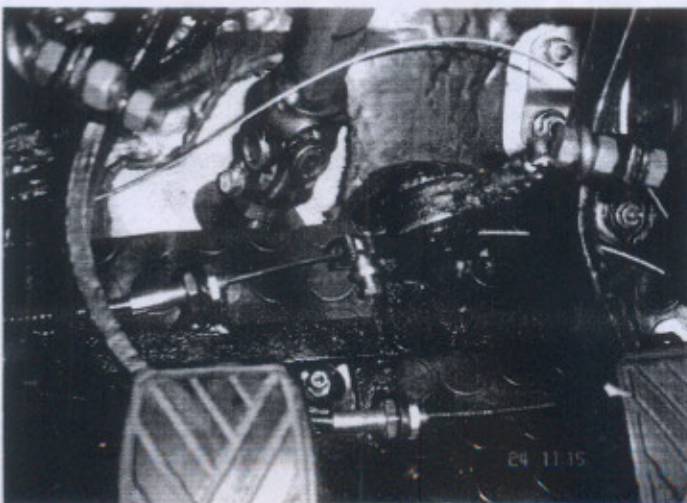
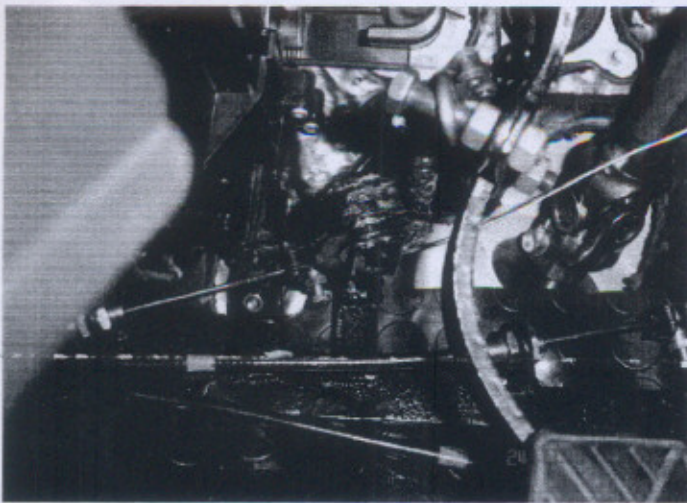
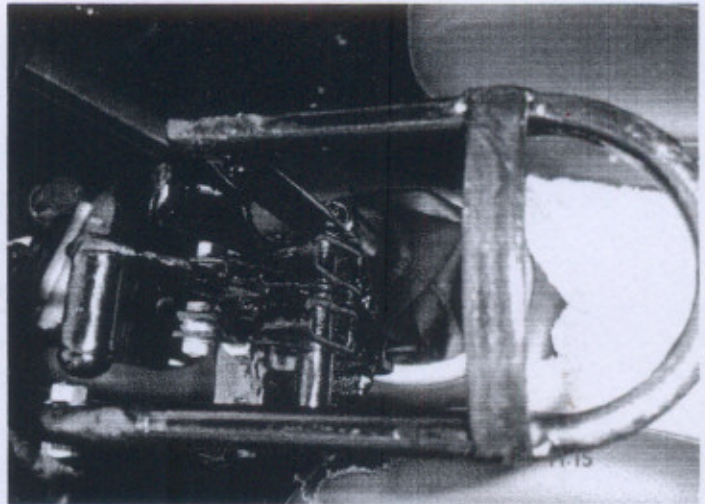


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Specifications



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