



INDIAN TRACTOR INDUSTRY

Impact of new emission norms likely to outweigh GST rate cut, pushing tractor prices higher

September 2025





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Tractor emission (TREM) V norms, proposed to reduce emissions and further improve fuel efficiency, are expected to increase tractor manufacturing costs and drive 15-20% price hike for high volume <50 HP segment.

The market is expected to further consolidate around 41-50 HP segment, which is expected to swell to 65-70% share, led by shift from both lower HP segments (as the price gap with 41-50 HP segment narrows) and niche >50 HP category.



TREM V implementation from April 2026: The revised emission standards (Bharat Stage TREM V) for tractors are slated to become applicable from April 2026. Unlike TREM IV norms, which came into effect in Jan 2023 for only >50 HP tractor segment, TREM V norms are set to be applicable across all HP categories. TREM V compliance would align Indian tractors with European (EU) stage V norms.



Revised norms mandate technological overhaul: The transition to TREM IV for greater than 50 HP tractors mandated the usage of common rail direct injection (CRDi) fuel injection system, among other changes. TREM V norms mandate a similar requirement for less than 50 HP tractors, while also necessitating the integration of diesel particulate filters (DPF) to further control pollution.



Increase in tractor price: On account of the revised norms, the sub-50 HP segment is expected to see a material 15-20% hike as it transitions from basic TREM IIIA norms, while >50 HP segment faces a lower 5-10% increment, given that the category already transitioned to TREM IV. The recent GST rate cut (~6% reduction in price) partially offsets the price increase necessitated by this regulatory change.



Expected rejig in HP wise mix: The TREM V transition is expected to help further consolidate the 41-50 HP segment's dominance, increasing its market share to an estimated 67% from 60-62%. This shift is likely to be driven by a steep 15-20% price hike in sub-50 HP categories, which could contract the lower end segments due to price sensitivity.

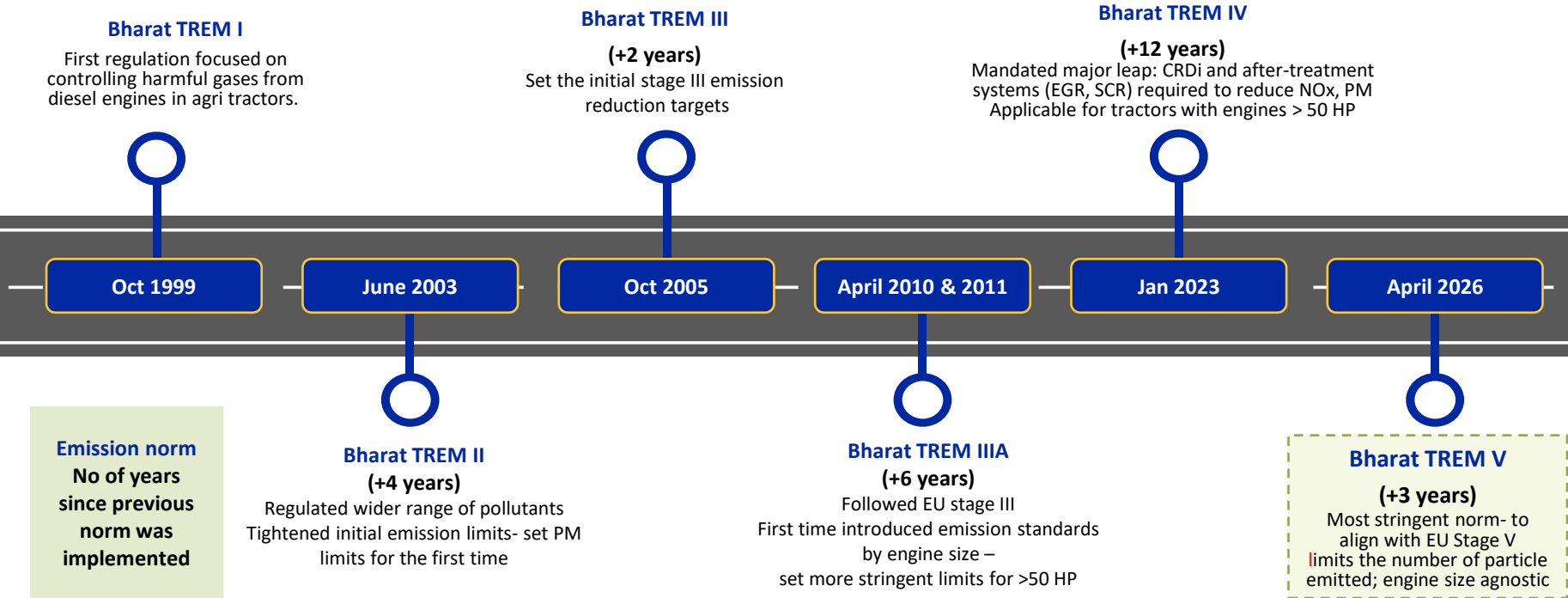


Delay in norms rollout remains monitorable: The Trem V emission norms, originally planned for April 2024, were deferred by the GoI following industry representations. In August 2025, TMA* has again requested for postponement of implementation of revised norms for the 25-50 HP segment, citing technical complexities and increased costs for farmers; a decision in this regard remains monitorable.

*TMA: Tractor Manufacturers Association

Indian tractor industry: Emission norm timeline

Exhibit 1: Implementation timeline and summary of emission norms for tractors in India



Source: ICRA Research; SCR: Selective catalytic reduction; EGR: Exhaust gas recirculation; PM: particulate matter;

Comparative benchmarking with global emission norms

Exhibit 2: Emission norm timeline across markets

Region	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026
EU	Stage I			Stage II			Stage IIIA				Stage IIIB				Stage V													
U.S.	Tier 1			Tier 2			Tier 3, Tier 4 Interim				Tier 4 Final																	
Canada							Tier 2		Tier 3				Tier 4															
Japan							NLTES				PNLTES																	
China							Stage I		Stage II				Stage IIIA				Stage IV											
India	TREM I		TREM II		TREM III				TREM IIIA								TREM IV		TREM V									
Brazil							PROCONVE MAR-I						MAR-I															
S. Korea						Tier 1		Tier 2		Tier 3			Tier 4 Final															

U.S. standard or equivalent
 EU standard or equivalent



At present, Indian tractors above 50 HP comply with TREM-IV norms, while tractors below 50 HP still comply with the older TREM-III A standards. While European Union (EU) and United States of America (US) have been early adopters of stringent emission norms, key volume markets like India and China have been gradually adopting stringent standards to align with the western markets.

Emission limits for various pollutants to be further lowered

Exhibit 3: Comparing the limits for key pollutants from TREM I to TREM V

TREM	Implementation Month	Engine Power (kW)	Emission limits (g/kWh)			
			CO	HC	NOx	PM
I	October 1999	All	14.0	3.5	18.0	Not Regulated
II	June 2003	All	9.0	-	15.0*	1.0
III A	April 2010	19 < P < 37	5.5	-	7.5*	0.6
	April 2011	37 < P < 560	5.0	-	4-4.7*	0.2-0.4
IV	January 2023	37 < P < 56	5.0	-	4.7*	0.025
IV	January 2023	56 < P < 560	3.5-5.0	0.19	0.4	0.025
V	April 2026	19 < P < 56	5.0	-	4.7*	0.015
		56 < P < 560	3.5-5.0	0.19	0.4	0.015

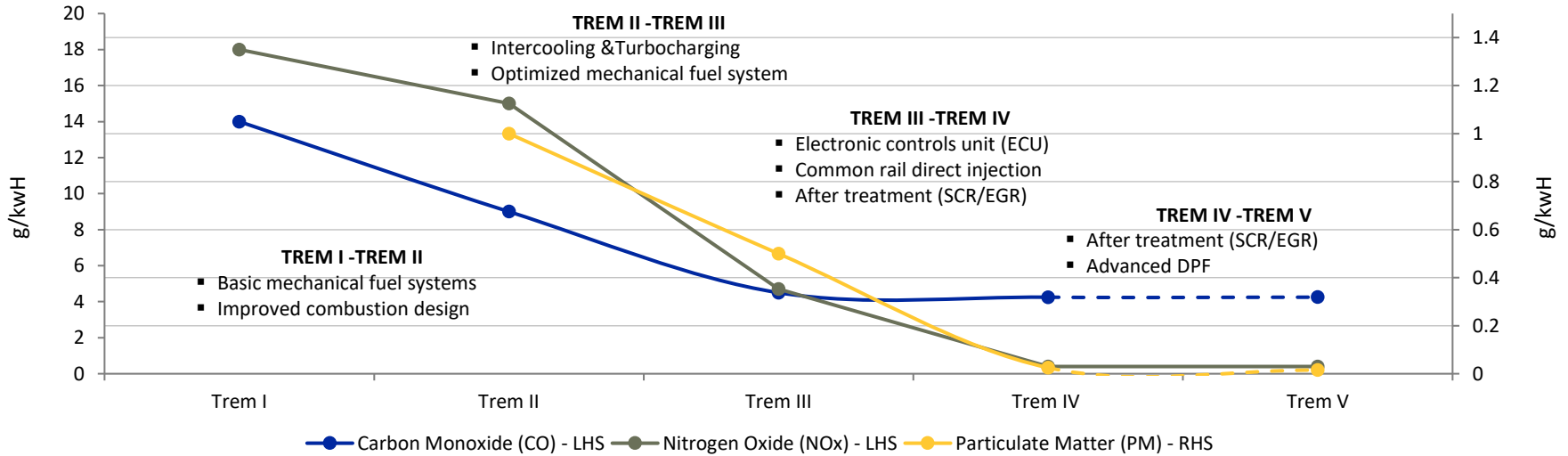


The trend shows a targeted regulatory strategy, with TREM IV mandating a significant reduction in PM and Nox for higher HP engines. The subsequent TREM V reduces PM by more than 90% for <50 HP segment, albeit with relatively lesser stringent NOx limits.

Source: The Gazette of India; ICRA Research; Values in asterik (*) represent a combined limit for HC and NOx. For these stages, a separate HC limit was not specified

Stringent emission norms mandate technological advancements

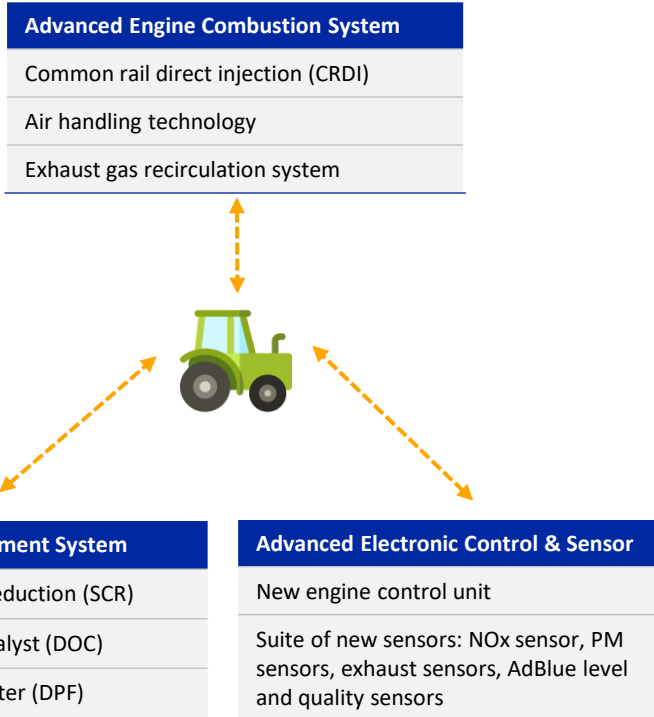
Exhibit 4: Technological step-up details with each transition



The transition to TREM IV for greater than 50 HP tractors mandated the usage of CRDi fuel injection system, consequently leading to a 10-12% hike in prices. A similar requirement for less than 50 HP tractors in the TREM V norms along with the integration of DPF is expected to result in price hike by 15-20%.

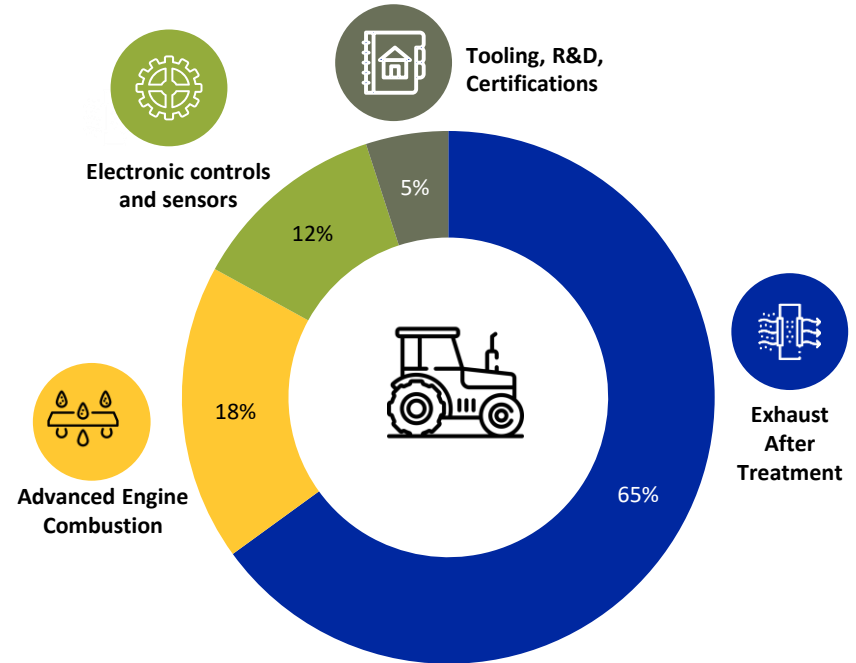
Exhaust after-treatment constitutes a bulk of the incremental cost

Exhibit 5: Key technological changes required under TREM V norms



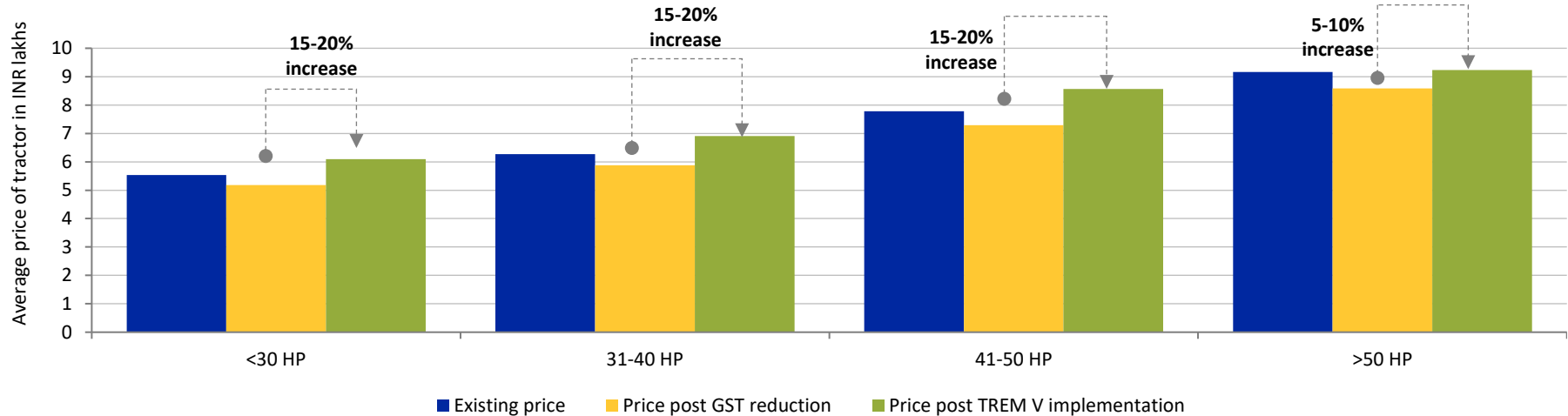
Source: ICRA Research

Exhibit 6: Indicative incremental cost break-up



Price hike of 15-20% expected for <50 HP segment with TREM V implementation

Exhibit 7: Segment-wise analysis of price hike on account of TREM V norms



- The price hike would vary with the scale of technological upgrade required. The sub-50 HP segment faces 15-20% increase as it makes a technological leap from basic TREM IIIA standard, while >50 HP segment is likely to see lower 5-10% hike.
- The OEMs are expected to gradually pass on the hike to farmers. However, GST reduction (from 12% to 5%) provides some relief, partially offsetting the likely price hike and cushioning the financial impact to farmers. Nonetheless, an increase in prices could moderate demand sentiments and has a potential to constrain industry volumes.

Source: ICRA Research

TREM V impact: Projecting the tractor market segment mix realignment

Exhibit 8: HP-wise industry volume mix*

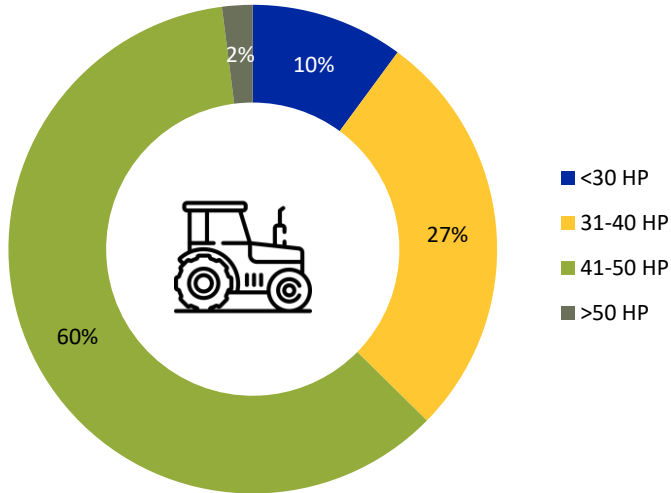
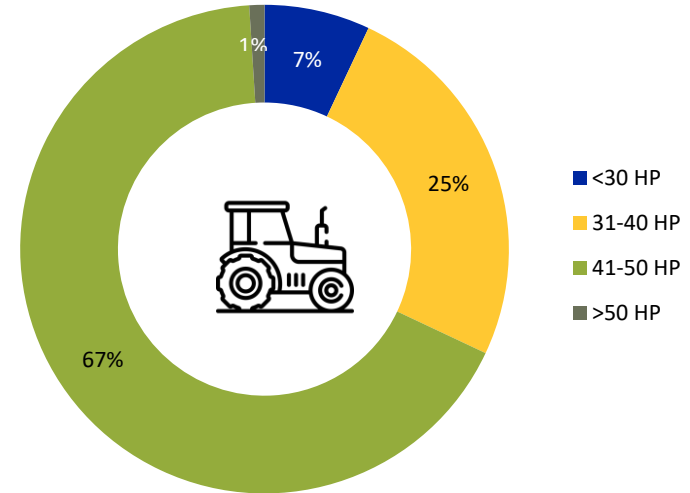


Exhibit 9: Projected HP-wise volume mix over medium term



The TREM V transition is expected to help further consolidate the 41-50 HP segment's dominance, increasing its market share from around 60-62% to an estimated 67%. This shift is likely to be driven by a steep 15-20% price hike in sub-50 HP categories, which could contract the lower end segments due to price sensitivity, while further contracting the >50HP category to a niche 1% share.

Source: ICRA Research; *FY2024 HP wise mix



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Analytical Contact Details

Name	Designation	Email	Contact Number
Jitin Makkar	Senior Vice President & Group Head	jitinm@icraindia.com	0124 – 4545 368
K. Srikumar	Senior Vice President & Co-Group Head	ksrikumar@icraindia.com	044 – 4596 4318
Rohan Gupta	Vice President & Sector Head	rohan.kanwar@icraindia.com	0124 – 4545 808
Astha Bansal	Senior Analyst	astha.bansal@icraindia.com	0124 – 4545 342





ICRA

Business Development/Media Contact Details

Name	Designation	Email	Contact Number
L Shivakumar	Chief Business Officer	shivakumar@icraindia.com	022-61693304
Sai Krishna	Head - Research Sales and Investor Connect	sai.krishna1@icraindia.com	9840774883
Rohit Gupta	Head Business Development – Infrastructure Sector	rohitg@icraindia.com	0124-4545340
Vivek Bhalla	Head Business Development – Financial Sector	vivek.bhalla@icraindia.com	022-61693372
Vinita Baid	Head Business Development – East	vinita.baid@icraindia.com	033-65216801
Shivam Bhatia	Head Business Development – Corporate Sector – North & South	shivam.bhatia@icraindia.com	0124-4545803
Sanket Kulkarni	Head Business Development – Corporate Sector – West	sanket.kulkarni@icraindia.com	022-6169 3365
Naznin Prodhani	Head - Group Corporate Communications & Media Relations	communications@icraindia.com	0124-4545860





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