

TONGIL INDUSTRIES CO.,LTD.

AUTOMOBILE DIVISION

Axle (Hypoid Gear)

Automation Line (Axle)

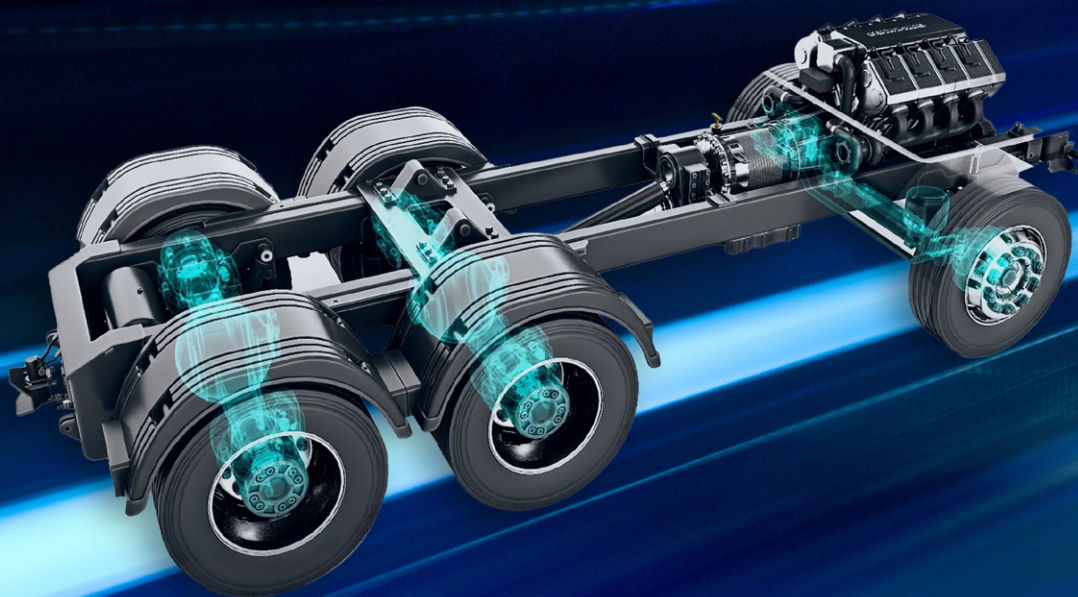
Commercial Vehicle

Transmission

Defense Industry

Overseas Export








Axle (Hypoid Gear)

Axles Developed with World-Class Technology as Core Part of Power Transmission System

TIC specializes in automotive axle assembly and components production, and it supplies axle parts that play key roles in automotive power transmission systems.



Hypoid & Bevel Gear Line up

Passenger SUVs		Main Vehicle Types	Size	Main OEM
		NX4_Tucson	Ø100 ~ Ø200	Hyundai-Transsys Hyundai-Wia
		MQ4_Sorento		
		TK_Tasman		
Medium & Heavy Commercial Vehicle		Main Vehicle Types	Size	Main OEM
		HR/PU_Truck 1ton	Ø180 ~ Ø480	Hyundai-Transsys
		QZ_Xcient		
		PY_Unicity		
Export, Military, and Forklifts		Main Vehicle Types	Size	Main OEM
		TY_Medium Tactical Vehicle	Ø180 ~ Ø480	Kia OSHKOSH AM General HD-Xitesolution
		JLTV/MTVR_US Military Tactical Vehicle		
		Construction Equipment – Forklift		

Line up of Vehicle Equipped



NX4_Tucson



HR/PU_Truck 1ton



TY_Medium Tactical Vehicle



MQ4_Sorento



QZ_Xcient



JLTV/MTVR_US Military
Tactical Vehicle



TK_Tasman



PY_Unicity



Construction Equipment –
Forklift

Other Applicable Vehicles : MQ5_Santafe / SX2_Kona / GV70_Genesis / LX2_Palisade
US4_Staria / SP2_Seltos / HM_Mohave / NQ5_Sportage

Automation Line (Axle)

Advanced Automation Line for Supply of High-Quality Products

TIC is equipped with advanced automation systems that ensure efficient and precise gear set production.

TIC continuously upgrades its facilities to maximize product quality and achieve fast and precise production.



Dry Cutting & Lapping



G280CX

Main equipment for small and medium-sized cutting line

- Automated equipment applied with advanced technology for high-performance gear machining
- High-speed and high-precision machining for efficient mass production

Maximum Gear Machining Diameter	280mm
Dimension Range	1-300
Maximum Cutter Diameter	9inch
Maximum Cutter Radius	105mm



600HTT

Main equipment for small and medium-sized lapping TEST line

- Fast and flexible test for spiral bevel and hypoid gear sets
- Contact pattern inspection, single flank test, and structural noise transmission measurement

Maximum Gear Diameter	600mm
Maximum Pinion Speed	3,000rpm
User-friendly control	Software Based on the Fanuc 31i Controller



600HTL

Main equipment for small and medium-sized lapping line

- Lapping machine with maximum production and reliability
- Equipment with high-speed, ergonomic, and compact design

Maximum Gear Diameter	600mm
Maximum Pinion and Gear Drive Speed	3,000rpm
System	SmartLAP™ SmartLAP™ Automated Torque Control System

Equipment Status

Facility status								
Cutting				Lapping				Cleaning
Cutting M/C	Cutter Grinding	Cutter Assembly	Cutter Inspection	Lapping	Test	Deburring cleaning	Laser marking machine	Cleaning machine
44	5	5	4	20	23	19	4	1



Commercial Vehicle

Commercial Components Trusted for Accumulative Technology and Quality

TIC's third factory produces components optimized for commercial vehicles, showing outstanding performance and durability in various transportation conditions.

TIC's components earned strong customer trust for their excellent facilities and technology.

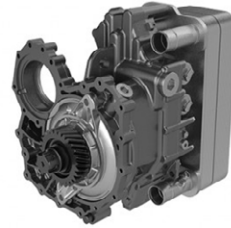


Commercial Vehicle



3.5T FRONT AXLE ASS'Y

- Transmits power to front wheels
- Enhances driving force with 4WD system



Commercial Truck Retarder

- Generates braking force through fluid resistance in the rotor and stator to prevent brake slippage on downhill

Equipment Status

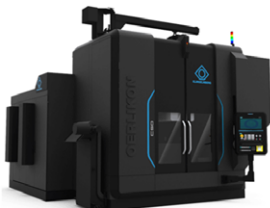


G600HC

Medium and Large Cutting Line

- Vertical gear hobbing machine for high-precision gear machining
- Ideal for large gear machining and shows high productivity and precision

Maximum Gear Machining Diameter	600mm
Dimension Range	1-300
Maximum Cutter Diameter	18inch
Maximum Cutter Radius	210mm



C50

Medium and Large Cutting Line

- 6-axis CNC vertical dry cutting machine for high-precision spiral bevel gear machining
- Eco-friendly and cost-effective machining without cutting oil

Maximum Gear Machining Diameter	500mm
Dimension Range	90
Cutter Head Diameter	88 – 181mm
Spindle Speed (Maximum)	450 rpm

Equipment Status

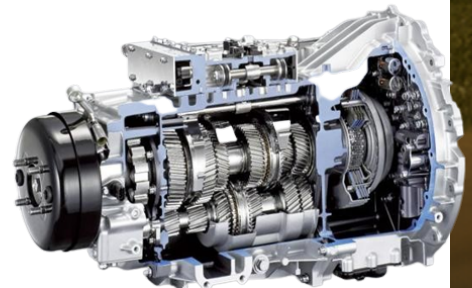
Facility status									
Cutting				Grinding			Lapping		
Cutting	Test	Chamfering	ETC	Internal Grinding	External Grinding	Tooth Grinding	Lapping	Test	Deburring & Cleaning
27	5	3	7	2	4	2	5	4	4



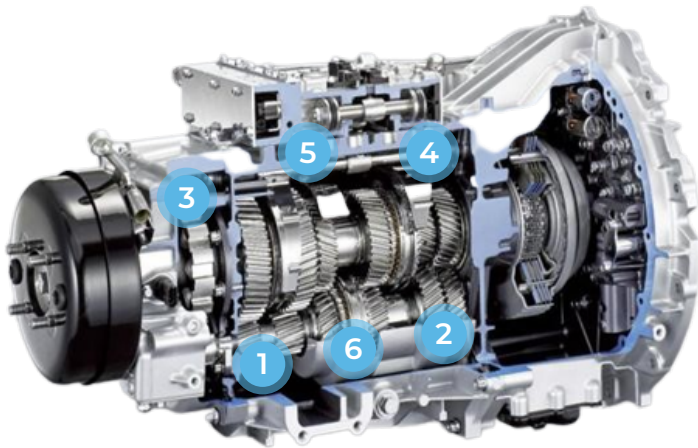
Transmission

Top-Quality Transmission Based on Continuous Technological Innovation

TIC has demonstrated its product quality to its clients by developing intermediate transmissions for commercial vehicles, Chunmoo MLRS, and mid-sized standard vehicles, leveraging its technology and know-how accumulated from gear and shaft production.



Transmission



1



SHAFT COUNT

MODEL Commercial Truck, Bus
CLIENT Hyundai Transys, OTC, etc.

2



REV IDLER GEAR

MODEL Commercial Truck, Bus
CLIENT Hyundai Transys, OTC, etc.

3



SHAFT PINION DRIVE

MODEL Commercial Truck, Bus
CLIENT Hyundai Transys, OTC, etc.

4



SHAFT MAIN

MODEL Commercial Truck, Bus
CLIENT Hyundai Transys, OTC, etc.

5



GEAR M/S 2NT

MODEL Commercial Truck, Bus
CLIENT Hyundai Transys, OTC, etc.

6



HUB SYN PART

MODEL Commercial Truck, Bus
CLIENT Hyundai Transys, OTC, etc.



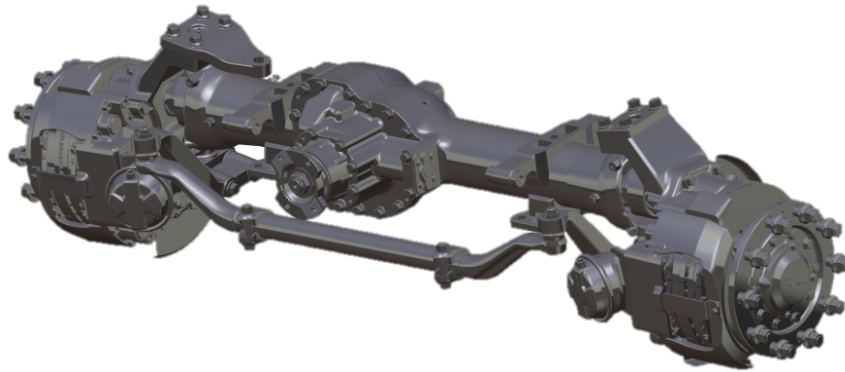
Defense Industry

TIC's Original Advanced Technology Supporting National Defense Industry

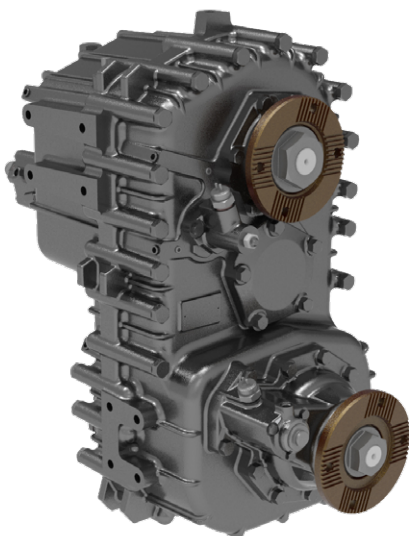
TIC specializes in producing axle assemblies for military vehicles by leveraging its technology and know-how accumulated from passenger/commercial vehicle component production. TIC also has demonstrated its technological competence to domestic and foreign clients by successfully developing axles for mid-sized tactical vehicles.



Defense Industry



Division		2½Ton Cargo	5Ton Cargo
Type	Drive Type	Potal 4 × 4	Potal 6 × 6
	Portal Upet (mm)	148.5mm	←
Allowable load (kgf)	Front	8,000 kg	←
	Rear (2nd)	8,000 kg	←
	Rear (3rd)	-	8,000 kg
Axial Distance (mm)		Double Reduction (Portal)	←
Differential Gear Ratio		Diff. Lock	Diff. Lock / Inter Lock
Differential Torque Ratio		Full Air,Disc	←
Differential Lock Type		CTIS, ABS	←



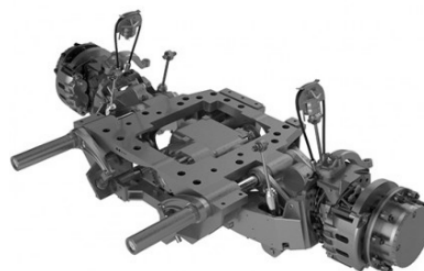
Division	Transfer Case
Type	Full Time
Gear Ratio	1:1.000 / 1:1.750
Allowable Input Torque (N.m)	20,000
Axial Distance (mm)	396
Differential Gear Ratio	2.39 (Planetary Type)
Differential Torque Ratio	FWD:RWD = 28:67
Differential Lock Type	Dog Clutch / Air Cylinder



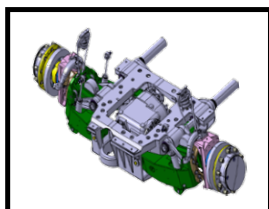
Overseas Export

TIC's Globally Recognized Development Capability

TIC successfully attracted domestic and foreign clients for excellent quality through continuous development of axle assembly technology. TIC is rapidly expanding into global markets by developing rigid axle and independent suspension axles (ISAS) for clients in foreign countries such as Indonesia and Vietnam.

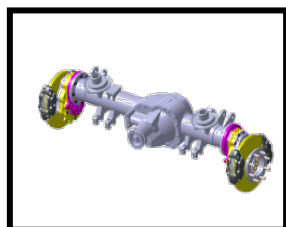
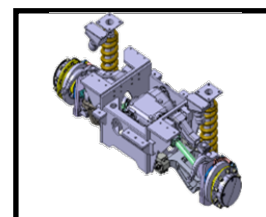


Overseas Export



Division		ANOA2
Drive Type		Torsion bar 4 × 4
Allowable load (kgf)	Front	5,000 kg
	Rear (2nd)	5,000 kg
	Rear (3rd)	5,000 kg
Gear Type		Double Reduction
Locking system		Diff. Lock
Break system		Full Air, Disc

Division		BADAK
Drive Type		Double Wishbone 4 × 4
Allowable load (kgf)	Front	7,500 kg
	Rear (2nd)	7,500 kg
	Rear (3rd)	7,500 kg
Gear Type		Double Reduction
Locking system		Diff. Lock
Break system		Full Air, Disc
Additional system		CTIS



Division		KOMODO
Drive Type		Potal 4 × 4
Allowable load (kgf)	Front	5,500 kg
	Rear (2nd)	5,500 kg
	Rear (3rd)	-
Gear Type		Double Reduction
Locking system		Diff. Lock
Break system		Full Air, Disc
Additional system		CTIS