BUY

CMP: **INR 7,457** Target Price: **INR 10,250** ▲ 37%

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31 March 2024

India | Equity Research | Initiating Coverage

Dynamatic Technologies

Defense

On the runway; set to soar further!

We initiate coverage on Dynamatic Technologies (DTL) with **BUY** rating and a target price of INR 10,250/share (based on 45x FY26E EPS). Key points: 1) Sole supplier of Flap Track Beams (FTB) for Airbus' 86% order backlog; 2) largest gear pump supplier in the world with a well-diversified client mix; 3) healthy blend of complex machining of the west and superior engineering of the east; 4) recent order wins likely to propel EBITDA to 2x FY23 by FY27E; and 5) likely to be a participant in domestic aerospace. Going ahead, we expect aerospace & defence segment to be the earnings driver, resulting in EBITDA CAGR of 19% and EBITDA margin of 17-18% (last five-year average: 13%) through to FY27E.

Aerospace to be the primary growth vector

DTL has almost 80% market share in the Indian OEM tractor market and ~38% in global tractor market (organized) (source: annual report), but we believe aerospace is likely to drive earnings growth as: 1) Recent order wins for flight critical aero structures for Falcon 6X from Dassault Aviation, Airbus A220 doors and rear fuselage for 40-seater D328eco regional turbo aircraft signify higher participation in supply chain of global aerospace OEMs; 2) it is the sole supplier of FTBs for Airbus' 86% order backlog, implying book/bill of 12.6x; 3) healthy orderbook of INR 50-60bn from ongoing platforms and another INR 60bn from the recent order wins; and 4) increasing potential of regional connectivity in India is likely to open more market for the company in near future. We expect aerospace & defence segment to contribute 45% of revenue by FY30E compared to 34% in FY23. Thus far, in our estimates, we have not considered incremental earnings from domestic defence orders.

Hydraulics and metallurgy divisions are turning a fresh leaf

DTL's hydraulics division has orderbook of INR 50-60bn, to be executed over the next 10 years. The megatrends of global OEMs shifting their manufacturing bases to India, rising urbanisation and modernisation in agriculture are likely to improve the demand for tractors and construction equipment. In metallurgy, the company is likely to gain from Germany revving up its defence spending, requiring artillery shells, which are currently under development at Erla site (in Germany).

Financial Summary

Y/E March (INR mn)	FY23A	FY24E	FY25E	FY26E
Net Revenue	13,158	14,841	16,755	18,571
EBITDA	1,813	1,664	2,416	2,814
EBITDA Margin (%)	13.8	11.2	14.4	15.2
Net Profit	428	1,396	1,180	1,545
EPS (INR)	67.3	219.6	185.6	243.1
EPS % Chg YoY	33.2	166.7	(3.3)	31.0
P/E (x)	110.7	41.5	42.9	32.8
EV/EBITDA (x)	28.7	30.6	20.6	17.3
RoCE (%)	8.5	8.0	11.3	13.4
RoE (%)	9.9	26.1	17.5	19.0

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Market Data

Market Cap (INR)	51bn
Market Cap (USD)	607mn
Bloomberg Code	DYTC IN
Reuters Code	DYNM BO
52-week Range (INR)	7,791 /2,585
Free Float (%)	57.0
ADTV-3M (mn) (USD)	2.0

Price Performance (%)	3m	6m	12m
Absolute	47.2	84.5	186.8
Relative to Sensex	45.4	72.1	159.0

Returns set to improve

In our view, DTL has already invested in augmenting its capabilities. The company has already invested INR 4.75bn in the past 7 years in augmenting its capacities and capabilities both in India and abroad. Hence, the capex has peaked out and we expect annual capex at INR 250-350mn hereon. Besides, the company has restructured its Erla facility in Germany and disposed the wind farm asset in Coimbatore spread over an area of 1.4mn sq.mt, while retaining an area of 352,000 sqmt for greater strategic value for future development. This is likely to bring down its gross debt by 30% YoY to INR 4.3bn (net debt/EBITDA at 2.1x) by end-Mar'24. We expect RoCE to improve to 22% by FY30E (FY23: 8.6%) as incremental earnings from new orders get reflected.

Creating opportunities, reaping the benefits

We like DTL's distinct way of expanding business. Key points: 1) Blending the benefits of advanced machining (capital intensive) of the west with extensive engineering and artisanal craftsmanship (labour intensive) of the east; 2) doing value engineering in components – from material to processes; and 3) fomenting local ecosystem – by involving and integrating other players and utilising their competencies, essential for securing big orders. In our view, these endeavours are likely to further boost earnings from aerospace & defence segment.

Outlook: An active beneficiary of aerospace ecosystem

We see DTL in a vantage position as strong orderbook (estimated) of INR 110-120bn (duration of almost 10 years) at global OEMs in aerospace & defence segment is likely to drive the earnings. The company also gains from being the sole supplier of FTBs for Airbus and has an opportunity to increase its wallet share from the existing customers. We are optimistic on DTL's participation in domestic defence segment in aerospace, having been the only supply-chain partner (among private players) of HAL to be collocated in the Nashik plant. It also has the capability to develop the entire fuselage of an airplane. We expect DTL's participation to be significant in fuselage and other advanced critical machined components. Besides, DTL has the distinction of being the only private aerospace player to share the same wall with international airport at Bengaluru, thus, boosting the possibility of a more active role in the defence ecosystem. On hydraulics front, we expect earnings to remain stable as the company has an existing orderbook of almost INR 50-60bn (~10x of revenue (ttm)), thus, keeping the revenue base diversified. We initiate coverage on DTL with **BUY** rating and TP of INR 10,250 based on 45x FY26E EPS.

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Executive summary

Sole supplier of FTBs for Airbus and the largest gear pumps producer

DTL enjoys leadership position in two major components in its two segments. The company is one of the largest manufacturers of hydraulic gear pumps with 80% share in Indian OEM tractor market and 38% of global tractor market (organised). The existing orderbook in hydraulics segment stands at INR 50-60bn, to be executed over the next 10 years. In aerospace & defence segment, the company manufactures the precision flight critical and complex airframe structures and components for both commercial and defence segments. DTL is tier-1 supplier to global aerospace OEMs and Primes such as Airbus, Boeing, Bell Helicopters, Dassault Aviation and Spirit Aero systems. DTL is the largest single source manufacturer of FTB in the world for Airbus and has delivered over 7,000+ aircraft sets (each set has 6 FTBs) of single aisle FTBs and 200+ aircraft sets (each set has 8 FTBs) for A330 until Mar-23. In FY23, DTL delivered 125th ship set of Boeing's P8 Poseidon Mission cabinet, that plays an important role in surveillance and defence capabilities of P8 Poseidon aircraft. Furthermore, DTL has successfully indigenised the manufacturing of major helicopter cabin assemblies in collaboration with Bell Helicopter. The company has the capacity to produce 12 sets of aft fuselage, turnover bulkhead, nose, roof and beam assemblies per month. As per our current estimates, DTL has the capacity to produce 720 aircraft sets and 80 aircraft sets for A320 and A330 families, respectively per annum. The orderbook for current platforms (excluding the recent wins in FY24) stands at INR 50-60bn, to be executed over the next 10 years.

Blending the west-east competencies

DTL is an instance of combining the innovative and complex machining available in the west with the engineering and artisanal craftsman skills of the east. All the three divisions- aerospace & defence, hydraulics and metallurgy - have overseas presence in Swindon and Birstol (UK) and Schwarzenberg (Germany). DTL has a clear strategy of setting up complex machinery (capital intensive) in the west so as to take advantage of low cost of capital, qualified raw material suppliers and local maintenance support (in case of breakdown) available there and doing assembly and engineering in India (labour intensive). The movement of components is generally to and fro wherein the machined components from west are airlifted to India for assembling and are then either despatched from India to the end-customer or transported back to the west for further machining, if required. Hence, the plants in different geographies function like work stations of the same supply chain, placed 7,000kms apart.

Recent orders have significant potential

Besides its bulwark business FTBs, the company is moving into other components and/or increasing its wallet share with the existing customers. These orders further diversify the earnings base by incorporating regional aircraft and business jets in the mix. After winning the contract in FY23 from Stelia Aeronautique Canada (a subsidiary of Airbus Atlantic SAS) for manufacturing the escape hatch door for Airbus A220, DTL has recently won a new contract with Airbus to manufacture and supply the main passenger doors, service doors, cargo doors and over-wing emergency exit doors for the A220 (8 doors per aircraft). The contract is likely to further leverage the strength of the domestic aerospace ecosystem and would involve other players such as Mahindra Aerostructure, Motherson Aerospace, Aequs, Wipro Aerospace and Ferra Aerospace with DTL being the lead integrator. Furthermore, DTL has received an order for manufacturing and assembly of flight critical Aero Structures for Falcon 6X from Dassault Aviation. Besides, DTL has recently announced partnership with Deutsche Aircraft to produce rear fuselage for the 40-seater D328eco regional turboprop aircraft for the life of the aircraft. This modern, fuel-efficient aircraft is designed to serve regional routes and can have traction in India, where government's focus is to develop regional air travel.

Favourable industry tailwinds in defence

Apart from DTL's strong presence in commercial aerospace segment, we see opportunities in domestic defence in coming years. DTL was the only vendor (among private players) to be collocated in HAL's Nashik plant during manufacturing of Su-30MK-I. Besides, the company was involved in developing front fuselage jigs for LCA aircraft. In our view, domestic aerospace sector is likely to see higher indigenisation and more involvement of local companies. DTL is well placed to grab that opportunity having supplied the front fuselage for LCA, middle fuselage for F-15EX and rear fuselage for Su-30MK-I. Besides, the company has indigenised foldable strut mechanism for ALH Dhurv that facilitates opening and closing of helicopter door during rugged environmental condition. DTL is the single source supplier to HAL for this product and has also received patent for the same. The company has also developed complex machined beams and frames for complex naval application (replacing imports) for BEL. On UAV front, the company has partnered with Israel Aerospace Industries (IAI) for manufacturing of UAVs in India and entered into tripartite agreement with HAL, IAL and Dynamatic for manufacturing, sales and service of large UAVs in India to cater the requirements of the Indian Defence and Central Armed Police Force (CAPF). DTL's new plant's location in Bengaluru and sharing the wall with international airport at Bengaluru are likely to be advantageous to the company for testing of such products. Besides, there is enough land available to cater to any future needs.

Earnings accretion and low capex to lead to FCF generation

We expect EBITDA CAGR of 15-20% over the next couple of years based on the current order backlog of Airbus and the recent orders won by the company. Post covid, build rates have improved across global OEMs and they are interested in developing vendors outside China (China plus one policy). The ramp up in execution of the recent orders won for doors of A-220 aircraft and partnership with Deutsche Aircraft for D328eco could further propel earnings. Besides, we have not considered the opportunities from domestic defence ecosystem in our workings, but from its past association with HAL, in both LCA and Su-30 platforms, we believe the involvement of DTL could be significant. While we expect net working capital days to increase to 165 days (FY23: 150 days) on the back of higher development activities in case of new orders, the need for incremental capex would not be there over the next couple of years as the company has already invested about INR 4.75bn in the past seven years in building capabilities. We expect net debt at INR 3.5bn (down 30% YoY) by FY24E, utilising the cash received from the sale of wind farm at Coimbatore (in Tamil Nadu), which will be used to develop Defence corridor, in which DTL will have major strategic presence. We expect DTL to be net cash by FY27E, hence, the company may have enough balance sheet headroom to aggressively pursue growth opportunities. Besides, DTL has generated free cashflow in each year over the past five years. With new contracts (particularly in aerospace segment) and improving prospects of metallurgy segment, we expect cash generation to improve. Over the next three years (FY25-27E), we expect cumulative free cash generation of ~INR 5.5-6bn, approximately 12-13% of the current market cap.

Reasonable valuations

We see good opportunities for DTL in both commercial and defence segments in aerospace. Besides, the global leadership in gear pumps is likely to result in stable performance from hydraulics segment. Compared to peers in aerospace ecosystem, that are trading at relatively rich valuations of 45-60x on FY26E (due to firm earnings growth prospects of 35-40%), DTL is a rare stock in the segment, trading at sub-35x FY26E EPS. While EBITDA CAGR is likely to sustain at 15-20% over FY27E, without considering the incremental earnings from domestic aerospace segment, we see stable cashflow and low capex requirement as comforting factors. We peg target multiple of DTL at 45x considering the higher earnings growth potential beyond FY26E due to the recently won contracts, higher wallet share from customers and opportunities available in domestic defence space.

Key risks

Exacerbating geopolitical uncertainties

We expect DTL to be impacted by geopolitical uncertainties as these have a bearing on the movement of material from one plant to the other. Besides, the ongoing geopolitical crisis threatens to push global recovery and exacerbate the inflationary environment. Combined with high interest rate scenarios and elevated raw material prices, it has resulted in capital becoming more expensive in most industries. As DTL operates in capital-intensive sector, it is vulnerable to these external factors that could impact build rates of aeroplanes and earnings growth for the company.

Customer and product concentration risk in aerospace segment

Currently, the company is significantly dependent on Airbus (major customer) and FTBs (major product) in aerospace. As per our analysis, Airbus and FTBs account for almost 45-50% of the revenue in aerospace segment. However, DTL is the sole supplier of FTBs for A320 and A330 series and the increasing reliance of Airbus is manifested in the recent order of doors for A220 series. Besides, Boeing and Bell together account for another 50% of the aerospace revenue. That said, even in aerospace segment, the company is diversifying its revenue across customers, products and segments. All these may reduce product cyclicality. In hydraulics, accounting for 33% of revenue, customers are fairly diversified, mitigating this risk to an extent.

Competition

The business environment in which DTL operates is highly competitive in nature due to constant innovations and evolution. Most OEMs maintain multiple suppliers for their products and do not prefer exclusive contracts to ensure redundancy in the supply chain, particularly post covid. In case of DTL, China plus one sourcing is of great advantage. Besides, DTL's long-standing relationship with customers and efforts to further penetrate in their supply chains is an effective mitigation measure. DTL is also taking lead on collaboration with players in domestic aerospace supply chain, ensuring that it moves from being just a component manufacturer to the lead integrator of systems and assemblies.

Technological changes

The segments in which DTL operates are subject to constant technological changes and there are new players emerging within the global aerospace ecosystem. DTL endeavours to mitigate this risk by constantly upgrading the existing technologies in order to meet customer needs. For instance, the company worked with Airbus to reduce the number of components in FTB for A320 by suggesting a monolithic structure with the change in material from titanium to aluminium, thus saving cost. In case of Bell helicopter, the company is entrenched in the supply chain to the extent of final assembly and analysed the components individually, re-modelled the entire fuselage, even going to the extent of making detailed drawings. The superior machining facilities in overseas operations and engineering infrastructure in India enable the company to adopt the technological changes rapidly, in line with customer requirements.

High dependence on promoters and senior management: The company is highly dependent on the promoter and management team, senior management and key managerial personnel. The loss of any key team member may adversely affect the business performance.

Investment theme

Sole supplier of FTBs for Airbus A-320 and A-330 family aircraft

DTL is the world's largest single source supplier of FTBs for Airbus (source: annual report). It currently supplies FTBs for A-320 family (A318, A319, A320 & A321) and A-330 family. These FTBs are class-1 flight critical assemblies that are connected to wings. DTL has been supplying flight critical FTBs assemblies to Airbus for the past 17 years, first as FTB Tier II and then as Tier I supplier. It has delivered more than 7,000 aircraft sets of FTBs till date and has also successfully completed the A-320 re-design of the FTB with a monolithic structure working closely with Spirit Aero Systems. **The company delivers close to 800 aircraft ship sets annually**.

In CY23, Airbus had delivered 735 commercial aircraft globally (aircraft type comprised 68 nos. of A220 family (53 nos. in CY22), 571 nos. of A320 family (516 nos. in CY22), 32 nos. of A330 family (32 nos. in CY22) and 64 nos. of A350 family (60 nos. in CY22)). Further, Airbus commercial aircraft business registered 2,094 net new orders in CY23. The end-CY23 order backlog stood at 8,598 aircraft, majority of which is for A320 family (~84%).

As per Global Market Forecast (GMF-23) of Airbus: "*Passenger traffic growth is expected to be ~3.6% (2019-2042 CAGR) and freight traffic is expected to grow ~3.2% (CY19-CY42 CAGR). Further, fleet in service beginning of CY20 is ~22,880 aircraft, which is expected to increase to ~46,560 aircraft by CY42, and* ***new deliveries are expected to be 40,850 aircraft over the next 20 years***".

Exhibit 1: Annual order summary of Airbus aircraft from past 8 years

New Orders (net of cancellation)	CY16	CY17	CY18	CY19	CY20	CY21	CY22	CY23
A220	0	0	135	63	30	38	105	141
A320 Family	**607**	**1,054**	**541**	**654**	**263**	**437**	**770**	**1,675**
A330	**83**	**21**	**27**	**89**	**-14**	**30**	**-65**	**-3**
A350	41	36	40	32	-11	2	10	281
Net orders inflow	731	1,111	743	838	268	507	820	2,094

Source: I-Sec research, Airbus

Exhibit 2: Historical annual orders and delivery

No. of aircrafts	CY16	CY17	CY18	CY19	CY20	CY21	CY22	CY23
New orders	731	1111	743	838	268	507	820	2,094
Delivery	688	718	800	863	566	611	661	735
New order to delivery (times)	**1.1**	**1.5**	**0.9**	**1.0**	**0.5**	**0.8**	**1.2**	**2.8**
Order Backlog	7,171	7,564	7,507	7,482	7,184	7,080	7,239	8,598
Delivery	688	718	800	863	566	611	661	735
New order to delivery (times)	**10.4**	**10.5**	**9.4**	**8.7**	**12.7**	**11.6**	**11.0**	**11.7**

Source: I-Sec research, Airbus

Exhibit 3: Orderbook and backlog of A-320 aircraft of Airbus

A 320 families	CY16	CY17	CY18	CY19	CY20	CY21	CY22	CY23
Net order	607	1054	541	654	263	437	770	1,675
Delivery	545	558	626	642	446	483	516	571
New order to delivery (times)	**1.1**	**1.9**	**0.9**	**1.0**	**0.6**	**0.9**	**1.5**	**2.9**
Order Back log	5,643	6,139	6,054	6,066	5,883	5,837	6,091	7,195
Order Book to bill (times)	**10.4**	**11.0**	**9.7**	**9.4**	**13.2**	**12.1**	**11.8**	**12.6**

Source: I-Sec research, Airbus

Exhibit 4: Order backlog of Airbus (Dec'23 end)

As on Dec'23end	No. of aircrafts	% of total aircraft
Order Book	8,598	100%
A- 320	7,195	84%
A- 220	602	7%
A- 350	621	7%
A- 330	180	2%

Source: I-Sec research, Airbus

New order to delivery ratio of 2.9x (highest) and book to bill of 12.6x (highest)

As mentioned in the above tables, DTL supplies FTBs to A-320 family and A-330 family, which comprises 84% and 2%, respectively, of total order backlog of Airbus. New order inflow for Airbus had been highest in CY23 with net order inflow of ~1,675 nos. of A-320 family aircraft which translates into **new order to delivery ratio of 2.9x (highest) and book to bill of 12.6x (highest).** This provides sufficient revenue visibility over the next 10-12 years, as Airbus has 7,195 aircraft under its order backlog of A-320 family and 180 aircraft for A-330 family.

Boeing-DTL partnership to bear results; a foray into international defence

DTL is the sole global supplier of power and mission cabinets for Boeing's P8 Poseidon aircraft. The company manufacturers Aft Pylon Assembly and Cargo Ramp Assembly for CH-47 Chinook helicopters. This is Boeing's largest export programme outside India.

Exhibit 5: Power and mission cabinets for P8 Poseidon

Source: I-Sec research, Company data[1]

Exhibit 6: Pylon and ramp assembly for CH-47

Source: I-Sec research, Company data

DTL has been awarded a contract for manufacturing assemblies for Boeing's newest tactical fighter, F-15EX Eagle II. This is the first time when aero structures for the latest and most advanced F-15EX Eagle II will be made in India. DTL has recently delivered Boeing MQ25 whiffletree assemblies. These whiffletree assemblies are for static and fatigue testing of control surfaces of MQ25 Unmanned Fueler Aircraft Program.

[1] Company data refers to information related to the company available in public domain including (but not limited to), Annual Report, Presentations, Earnings release, YouTube videos and management interviews

Exhibit 7: Key Boeing platforms and DTL's contribution

Platform	Outlook
Boeing MQ25	In 2021, Boeing and US Navy conducted three historic un-crewed aerial refuelling missions with MQ-25 T1 test asset, transferring fuel for the first time to an F/A-18 Super Hornet, E-2D Hawkeye and F-35C Lightning II. The F/A-18 flight marked the first time in history an un-crewed aircraft refuelling another aircraft. Following this, Boeing had announced a new USD 200mn, 300,000-sq-ft MQ-25 production facility, scheduled for completion in CY24 at Mid America St. Louis Airport in Illinois. In 2020, US Navy exercised an option for three additional MQ-25s, the service's first operational carrier-based un-crewed aircraft. Boeing is manufacturing seven aircraft and two test articles under the initial contract awarded in 2018, and ***the US Navy's stated requirement is for >70 nos. of MQ-25s***. ***DTL contribution:*** *DTL has delivered Boeing MQ25 whiffletree assemblies (these whiffletree assemblies are for static and fatigue testing of control surfaces of MQ25 Unmanned Fueler Aircraft Program).*
Boeing F-15EX	Boeing's defence platform includes the digitally transformed F-15EX Eagle II; the Block III F/A-18 Super Hornet and F/A-18 Super Hornets that have gone through Service Life Modification (SLM) line, the EA-18G Growler, and the T-7A advanced pilot training system. Two F-15EX Eagle II were delivered to US Air Force in 2021, ahead of schedule, and performed full-scale operational testing six months later, achieving impressive results with their advanced survivability, weapons payload and networking capabilities. ***DTL contribution:*** *DTL has designed and delivered Boeing F-15EX assemblies, which involved developing 3D models, tooling for detail parts and assembly, and manufacturing detail parts and assembly in record time by adapting APQP methodology: first time right, every time right.*
T-7A Red Hawk	After US Air Force awarded Boeing the Advanced Pilot Training System contract in 2018, the T-X aircraft was officially named T-7A Red Hawk in 2019. The contract is for 351 jets, 46 high-resolution simulators and associated ground equipment. To date, more than 450 successful engineering and manufacturing development flight tests have been accomplished at advanced trainer stages for initial production. The first EMD T-7A Red Hawk was officially rolled out for US Air Force on Apr 28, '22. ***DTL contribution:*** *DTL has been awarded a contract for the delivery of tools for static and fatigue testing of control surfaces of Boeing-SAAB T-7A Red Hawk Program.*
CH-47 Chinook Helicopters	In 2022, Boeing achieved two key international vertical lift down-select awards. In Jun'23, Germany selected Chinook (60 aircraft) as its future heavy-lift aircraft, and in Sep'23, Polish government chose Apache (96 aircraft) as its upcoming attack helicopter. For Chinook, Boeing received awards to produce six more MH-47G aircraft and two more CH-47F Block II. In Dec'23, Boeing also received a contract to produce two more Block I Chinooks for the Army and 12 for the Egyptian Air Force. ***DTL contribution:*** *The company manufacturers Aft Pylon Assembly and Cargo Ramp Assembly. This is Boeing Defence system's largest export programme outside India.*
P8 Poseidon Maritime Reconnaissance Aircraft	In Feb'22, Boeing delivered the 12th P-8I, which was the fourth aircraft to be delivered under an option contract for four additional aircraft that the Indian MoD placed in 2016. The P-8 program has delivered nine of nine P-8A Poseidon aircraft to the United Kingdom and five of five P-8A Poseidon aircraft to Norway. In Dec'22, Boeing delivered the first P-8A to New Zealand. This delivery also marked the 155th P-8 aircraft delivered to global customers. **DTL contribution:** *The company is sole global supplier of power and mission cabinets for Boeing's P8 Poseidon Maritime Reconnaissance Aircraft.*

Source: I-Sec research, Boeing annual report

Recent orders in aerospace segment diversify the earnings base

DTL has received three recent orders in aerospace segment: i) long-term contract for manufacturing and assembling of flight critical aero structures for Falcon 6X (business jet) with Dassault Aviation, ii) contract for manufacturing doors for A220 aircraft (commercial aircraft), and iii) strategic partnership with Deutsche Aircraft to manufacture rear fuselage for D328eco (regional aircraft). We believe these orders are significant and diversify DTL's earnings across different aircraft types, suppliers and components.

In Jan'24, DTL won an order for manufacturing and assembling of flight critical aero structures for Falcon 6X from Dassault aviation. This contract provides the company an opportunity to foray into business jet segment.

Close on the heels of executing a contract with Airbus for manufacturing the Escape Hatch Door (EHD) for Airbus A220 aircraft, DTL executed a new contract in Feb'24 with Airbus to manufacture and supply the main passenger doors, service doors, cargo doors and over-wing emergency exit doors for A-220 aircraft. The existing backlog of 602 aircraft and book/bill of 8.9 years present a significant long-term opportunity for the company. This contract is significant as it may leverage the strength of the Indian aerospace ecosystem to deeply industrialise airplane doors for the global aviation industry. The company intends to work with large supplier partners like Mahindra Aerostructure, Motherson Aerospace, Aequs, Wipro Aerospace and Ferra Aerospace.

Exhibit 8: Orderbook and backlog of A-220 aircraft of Airbus

A-220 family	CY18	CY19	CY20	CY21	CY22	CY23
Net order	135	63	30	38	105	141
Delivery	20	48	38	50	53	68
New order to delivery (times)	**6.8**	**1.3**	**0.8**	**0.8**	**2.0**	**2.1**
Order Back log	482	497	489	477	529	602
Book to bill (times)	**24.1**	**10.4**	**12.9**	**9.5**	**10.0**	**8.9**

Source: I-Sec research, Airbus

In Mar'24, DTL has signed a contract with Deutsche Aircraft to manufacture rear fuselage for D328eco regional turboprop aircraft. These aircraft would connect tier 2 and tier 3 cities in Europe and has an estimated potential for 500 aircraft spread over 10 years. This contract is for the life of the aircraft and has significant potential trickle-down effect for the domestic market as well. In India, the Civil Aviation Ministry has notified the Small Aircraft Scheme (SARAS) under the regional connectivity scheme UDAN, with an aim to stimulate regional and hinterland air connectivity. The focus of the scheme is to encourage the operations of small aircraft with 20 seats and below, which can operate to and from airports and do not require significant infrastructure.

We peg the total orderbook from these three recent orders in Q4FY24 at INR 60bn spread over 10 years. This is in addition to the orderbook of INR 50-60bn from the ongoing platforms.

Value addition to customers' supply chain

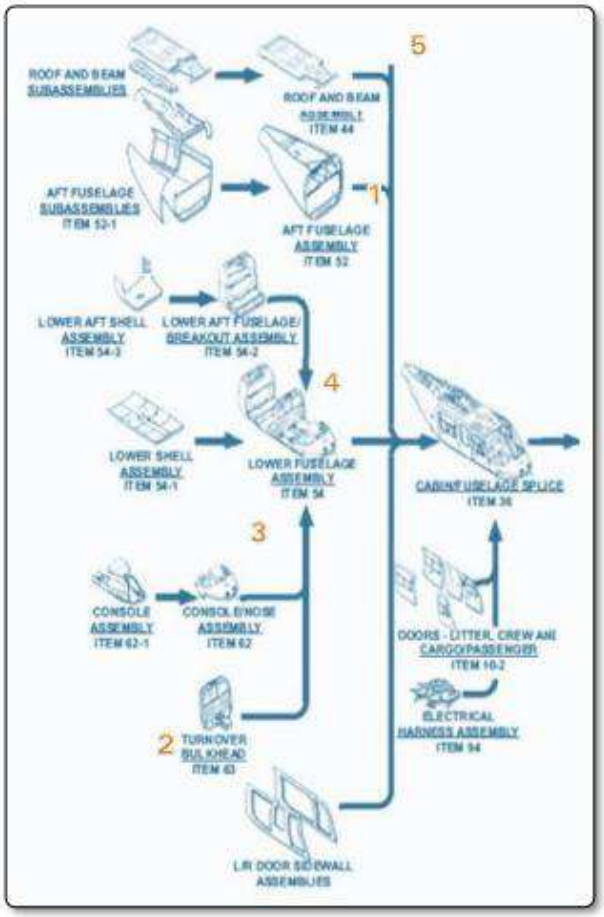
In our view, DTL is not just the supplier, but also focuses on value engineering, supply chain consolidation and simplification. We mention below two case studies, merit attention in this regard:

Bell 407 programme

The Bell 407 is the world's largest selling helicopter and DTL has been contracted as a single source supplier of major airframe assemblies for the Bell 407 helicopter for the life of programme. The industrialisation programme at DTL entailed digitisation of over 2,000 detailed parts, followed by development of tooling, processes and part manufacturing. These are supplied as five major fuselage assemblies instead of 1,600 part numbers before. As a result of digitisation, DTL was able to produce sheet metal parts to a better standard and at a lower cost than incumbent suppliers in North America, besides providing an optionality to further evolve Bell 407 airframe.

As a result of supply chain consolidation and digitisation, 56 incumbents were replaced by just 1, legacy discrepancies were removed and new baseline configuration evolved.

Exhibit 9: 5 major assemblies supplied for Bell 407 airframe



Source: I-Sec research, Company data1

Monolithic FTB for A-320

DTL through its UK subsidiary, Dynamatic-Oldland Aerospace, Swindon, worked closely with Airbus and Spirit Aerosystems in developing a monolithic version of A320 FTB, where the number of parts went down from over 200 to under 20 per assembly. Besides positioning DTL as an elite supplier capable of engineering new iterations of flight-critical class-1 aero-structures for global OEMs, the development increases the work-share of DTL per aircraft as it was involved in machining 100% of these monolithic parts, in house.

Exhibit 10: Monolithic beam for A-320

Source: I-Sec research, Company data

Taking advantage of west-east complementarity

DTL operates advanced machining plants in the west while assembly (manpower intensive) activities are carried out in its India plants. Acquired in 2008, DTL's UK facility has complex five axis machining capabilities for the manufacturing of a vast range of machines, finishing, assembly and inspection operations. The facility has long-term contracts with OEMs and tier 1 suppliers and is a certified supplier to Airbus UK, Boeing, GKN Aerospace, Magellan Aerospace, GE Aviation Systems, Lockheed Martin, Augsta Westland, Spirit AeroSystems, UK.

DTL acquired hydraulics business in the UK in CY07. The plant produces performance engineering hydraulic products such as aluminium and cast iron gear pumps, fan drive system and engineered packages etc. The unit is a supplier to leading global tractor OEMs including John Deere and Case New Holland. The unit has comprehensive product testing and validation capabilities with advanced design knowledge for mobile hydraulics sector and is an approved supplier to ADL, Terex Limited and ZF.

DTL's Eisenwerk Erla GmbH foundry is one of the finest ferrous foundries in Europe with specialisation in high-grade alloys such as Si-Mo, Ni-Resist, Heat Resistant Steel and Core Making Technology of Turbocharger castings. The foundry has over 12.5% share of global Petrol Turbocharger market. Currently, the foundry is in the process of transformation from an automotive/foundry-focus to aerospace business. The foundry is also expanding its presence in defence sector. In view of the current geopolitical situation, Germany is looking to increase its defence spending to 3.5% of GDP from 2% currently. Among other defence products, the focus is to develop artillery shell arsenal. We believe Erla can have a meaningful share of artillery shell market in the future.

In India, DTL does manpower intensive assembly process by utilising locally available skills including artisanal workmanship. The complementary skills of west and east aid the company as having complex machining and casting units in the west is helpful as cost of capital is lower and breakdown maintenance can be done in a timely manner, while assembling units in India helps DTL to do manpower intensive engineering processes in a cost efficient manner.

Opportunities in domestic aerospace sector

DTL has been associated with HAL for various platforms. In the past, DTL was the only private vendor to be collocated with HAL in Nashik facility for manufacturing Su-30 MKI. DTL has been associated with Lakshya Pilotless Target Aircraft for Wings and rear fuselage, HJT 36 Intermediate Jet Trainer for Ailerons and flaps and Su-30 MKI for vertical fins, slats, cannards, Stabilisers, air brakes and ventral fins (marked in green).

Exhibit 11: Lakshya, HJT36 & Su-30 MK1 (in order)

Source: I-Sec research, Company data

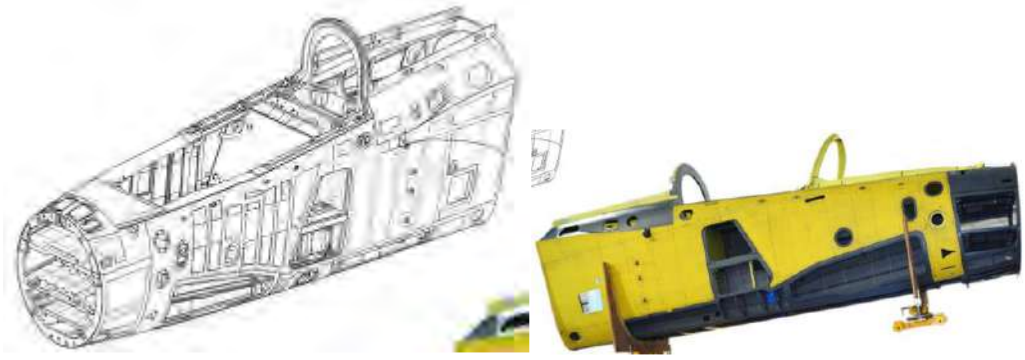
In addition, DTL has been chosen as the supplier of front fuselage assembly for LCA Tejas by HAL.

Exhibit 12: LCA Tejas: DTL's scope of work

Source: I-Sec research, Company data

Going ahead, we expect DTL to be associated with HAL as the production of LCA Tejas Mk-1A (83 nos ordered and AoN for 97 nos. issued), LCA Tejas Mk-2 (probable orders for 200 nos) and AMCA (probable orders for 200 nos.) commences. That said, we do not expect DTL to be dependent on HAL for its earnings growth as its current orderbook is significant.

Exhibit 13: LCA Tejas: Front fuselage



Source: I-Sec research, Company data

A well-diversified revenue base with competitive market standing

DTL operates in three business segments: i) Hydraulics, ii) aerospace & defence and iii) metallurgy. While each of the segment contributes ~1/3rd of the revenue, aerospace contributed >50% of its consolidated EBITDA, followed by hydraulics contributing ~39% of EBITDA and metallurgy segment contributing ~8% of overall EBITDA of the company. The European market (incl. UK) contributes 55% of the revenue, while domestic market contributes ~25%; USA contribution is ~11-12%. DTL's majority of metallurgical segment revenue comes from the European market.

Exhibit 14: Revenue contribution - geographical wise

Revenue (%)	FY18	FY19	FY20	FY21	FY22	FY23
India	26.6%	30.9%	27.1%	25.4%	25.5%	23.5%
Europe (ex-UK)	45.4%	40.2%	34.8%	39.0%	45.7%	36.8%
UK	14.9%	13.8%	17.0%	13.3%	13.2%	19.2%
USA	12.5%	12.0%	13.8%	17.5%	9.0%	11.5%
Canada	0.0%	0.0%	6.1%	4.1%	3.5%	4.0%
RoW	0.7%	3.2%	1.1%	0.7%	3.0%	5.0%

Source: I-Sec research

Exhibit 15: Segmental revenue distribution

% of revenue	FY18	FY19	FY20	FY21	FY22	FY23
Hydraulics	23.8%	24.2%	24.0%	26.6%	33.8%	35.1%
Aerospace	26.8%	31.3%	40.5%	33.4%	28.7%	33.2%
Metallurgy	49.4%	44.5%	35.4%	39.5%	37.1%	31.7%
Consol revenue (INR mn)	**14,084**	**15,788**	**13,600**	**12,106**	**12,735**	**13,158**

Source: Company data, I-Sec research

Exhibit 16: Segmental key numbers

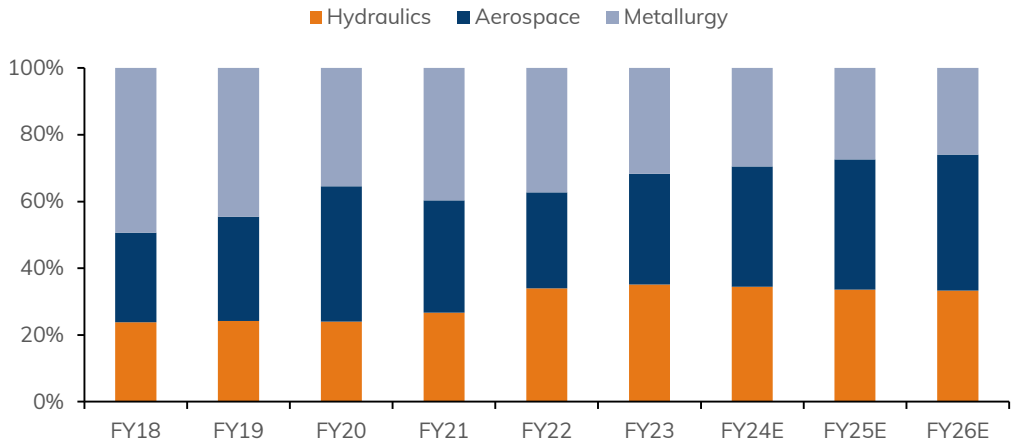
(INR in mn)	FY17	FY18	FY19	FY20	FY21	FY22	FY23	9MFY24
Aerospace – Segment								
Revenue	3,457	3,564	4,689	4,976	3,740	3,601	4,374	3,682
EBITDA	1,047	814	1,168	1,525	1,113	990	1,168	864
EBITDA Margin (%)	30.3%	22.9%	24.9%	30.7%	29.8%	27.5%	26.7%	23.5%
Hydraulics – Segment								
Revenue	2,768	3,155	3,631	2,950	2,976	4,237	4,617	3,259
EBITDA	398	371	416	229	311	732	875	307
EBITDA Margin (%)	14.4%	11.7%	11.4%	7.7%	10.4%	17.3%	18.9%	9.4%
Metallurgy – Segment								
Revenue	8,836	6,556	6,683	4,350	4,419	4,650	4,166	3,647
EBITDA	294	257	251	297	182	203	171	231
EBITDA Margin (%)	3.3%	3.9%	3.8%	6.8%	4.1%	4.4%	4.1%	6.3%

Source: Company data, I-Sec research

The contribution from hydraulics segment and aerospace segment has increased over the years while contribution from metallurgy segment has declined over the years. Historically, EBITDA margin of aerospace segment is >20%, while for hydraulics segment margin has been volatile. Metallurgical segment's EBITDA margin stood at ~4-6% between FY16-FY23. FY23 had witnessed the highest margin (in the last 5 years) in aerospace and hydraulics segments led by better revenue mix, while metallurgical segment witnessed a decline in margin due to increased input costs.

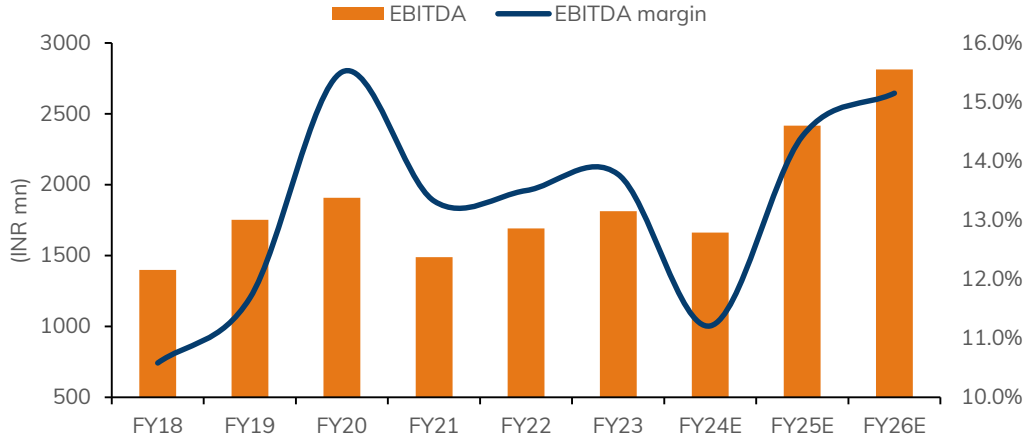
Story in charts

Exhibit 17: See higher revenue contribution from aerospace segment in future



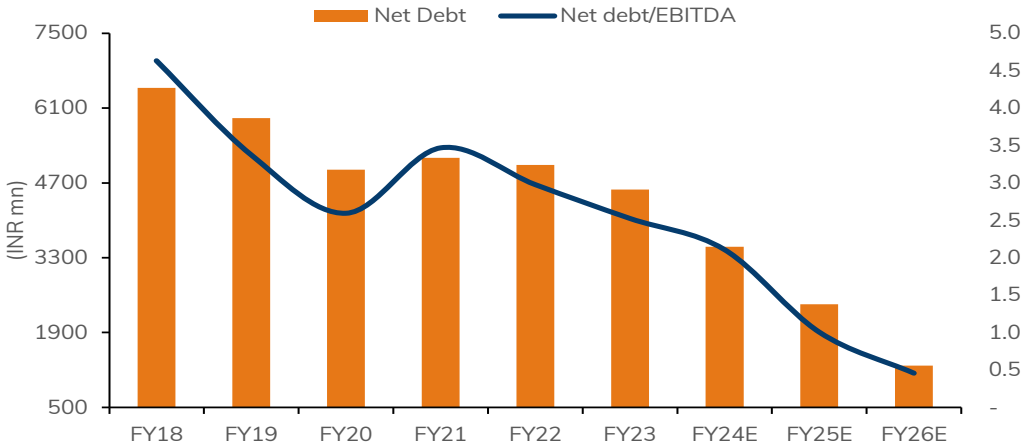
Source: I-Sec research, Company data

Exhibit 18: Expect EBITDA margin above 15% by FY26E



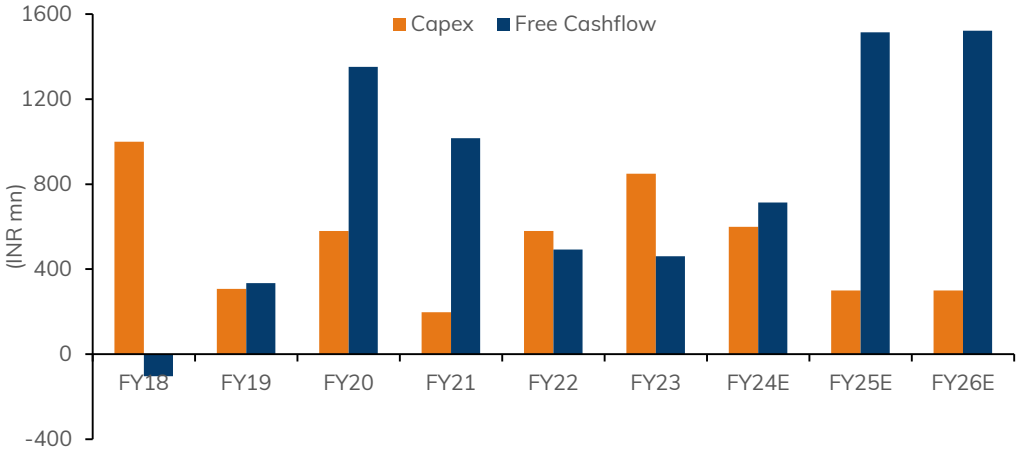
Source: I-Sec research, Company data

Exhibit 19: Net debt may come off and leverage is set to improve



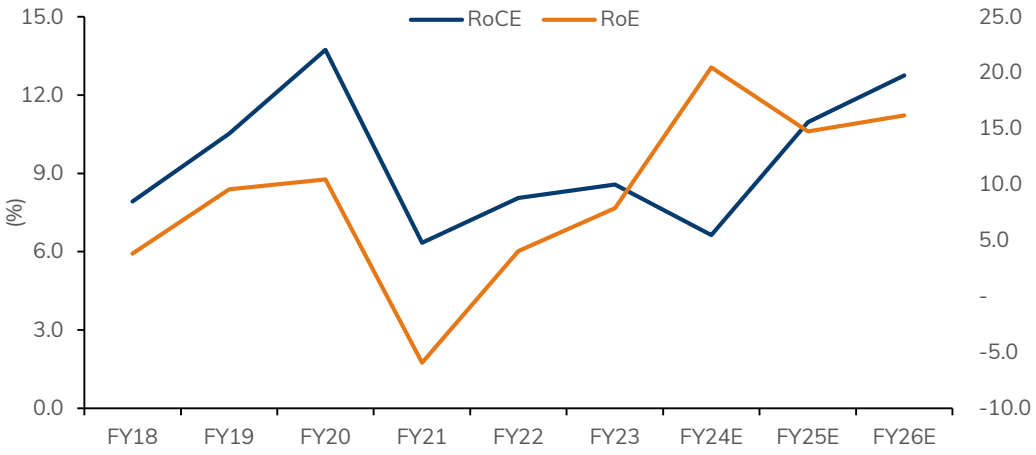
Source: I-Sec research, Company data

Exhibit 20: Capex and free cashflow progression



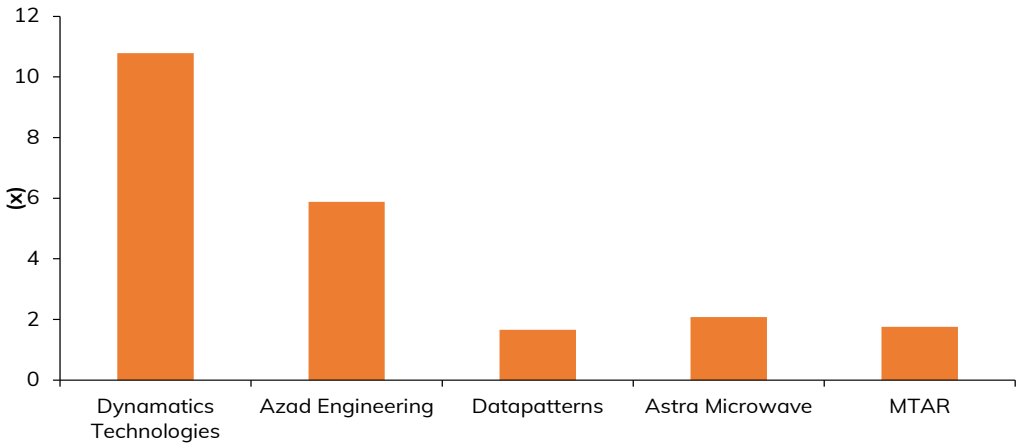
Source: I-Sec research, Company data

Exhibit 21: RoE and RoCE expected to improve



Source: I-Sec research, Company data

Exhibit 22: Highest Book-to-Bill ratio among peers (below)



Source: I-Sec research, Bloomberg, Company data

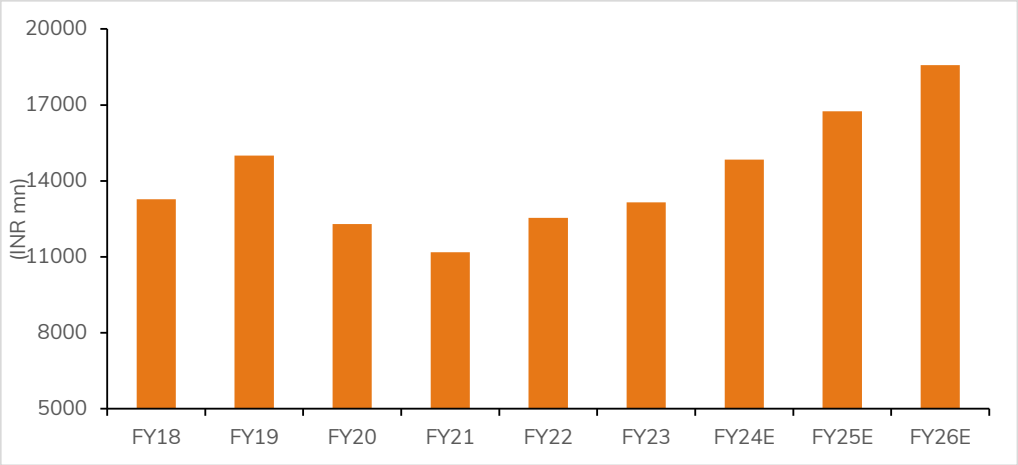
Financial analysis

Healthy orderbook gives significant revenue visibility

DTL's total current orderbook is at a healthy INR 160-170bn, implying book/bill of 12-13x. The orderbook for aerospace stands at INR 110-120bn (25-27x (ttm) revenue). This orderbook is likely to be executed over the next 10 years, hence, we expect overall and aerospace revenue to rise to 3x and 2x, respectively, compared to FY23 levels.

Going ahead, we expect revenue growth at 11% YoY through to FY26E compared to FY23 levels. Revenue in 9MFY24 was impacted by the shifting of aerospace facility (from Peenya) to the current location (near Bengaluru international airport). As the approvals are site specific, this resulted in a delay in revenue recognition, which is now back on track. Beyond FY26E, we expect recently won new orders to contribute significantly to growth.

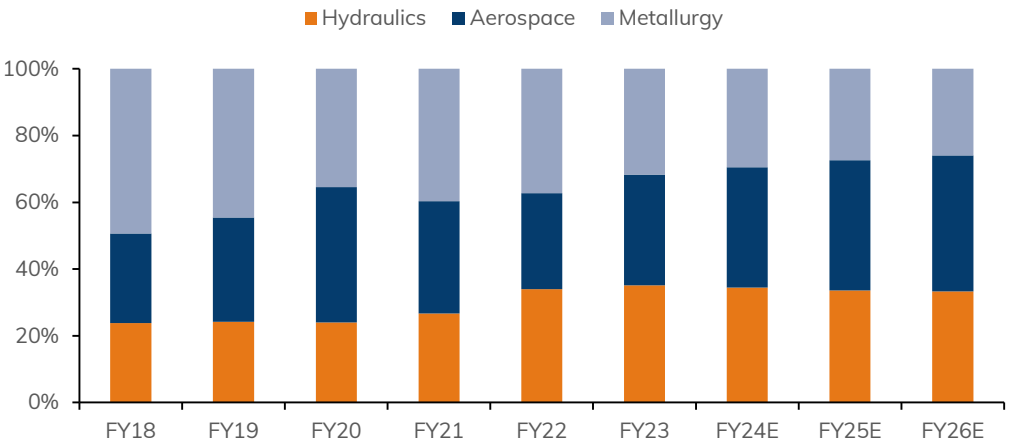
Exhibit 23: Revenue progression through to FY26E



Source: I-Sec research, Company data

As growth in aerospace is likely to be faster, we expect the division to contribute 45% of overall revenue by FY30E compared to 33% in FY23.

Exhibit 24: See higher revenue contribution from aerospace segment in future



Source: I-Sec research, Company data

The European market (incl. UK) contributes 55% of the revenue of the company, while domestic market contributes ~25%; USA's contribution is ~11-12%. DTL's majority of metallurgical segment revenue comes from the European market. We expect this trend to continue and exports, overall to contribute almost 3/4th of overall revenue.

Exhibit 25: Geographical revenue distribution

Revenue (%)	FY18	FY19	FY20	FY21	FY22	FY23
India	26.6%	30.9%	27.1%	25.4%	25.5%	23.5%
Europe (ex-UK)	45.4%	40.2%	34.8%	39.0%	45.7%	36.8%
UK	14.9%	13.8%	17.0%	13.3%	13.2%	19.2%
USA	12.5%	12.0%	13.8%	17.5%	9.0%	11.5%
Canada	0.0%	0.0%	6.1%	4.1%	3.5%	4.0%
RoW	0.7%	3.2%	1.1%	0.7%	3.0%	5.0%

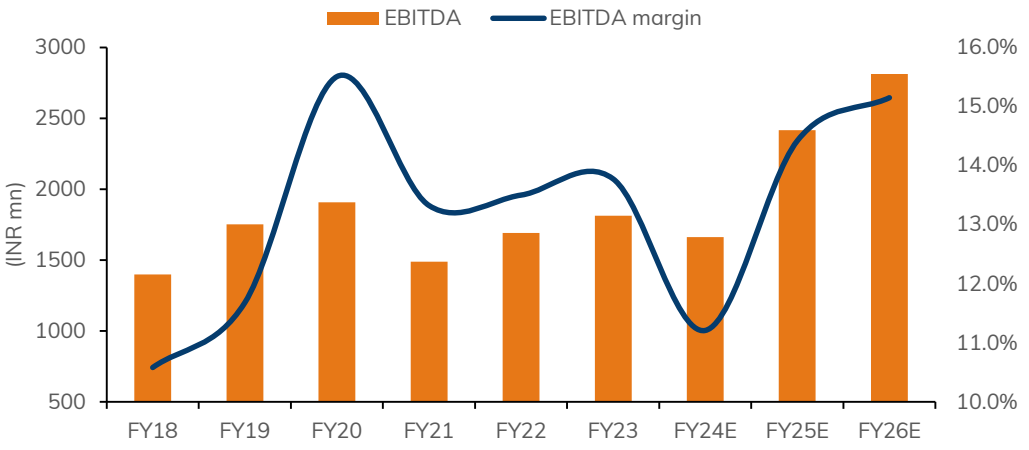
Source: Company data, I-Sec research

EBITDA margin may increase as contribution from aerospace rises

While each of the segment contributes ~1/3rd of the revenue, aerospace contributed >50% of its EBITDA, followed by hydraulics contributing ~39% of EBITDA and metallurgy segment contributing ~8% of overall EBITDA. Historically, EBITDA margin of aerospace segment is >20%, while hydraulics segment margin has been volatile. Metallurgical segment's EBITDA margin stood at ~4-6% in FY16-FY23. FY23 had witnessed the highest margin (in the last 5 years) in aerospace and hydraulics segments led by better revenue mix, while metallurgical segment witnessed a decline in margin due to increased input costs.

Going ahead, we expect EBITDA margin to improve owing to higher share of profitable aerospace segment on incremental earnings from the recent orders flowing through. As a result, overall EBITDA margin is likely to rise to 15.2% by FY26E compared to 13.8% in FY23.

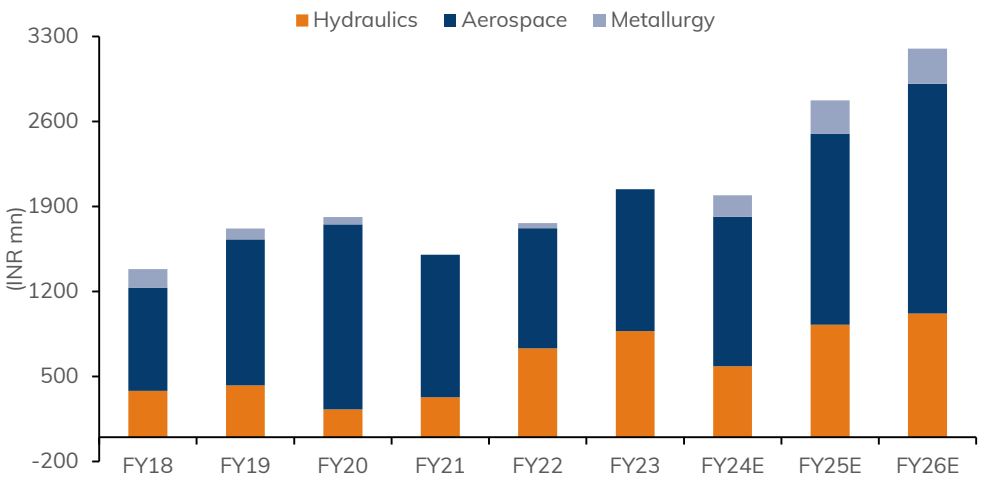
Exhibit 26: Expect EBITDA margin above 15% by FY26E



Source: I-Sec research, Company data

We expect aerospace segment to contribute almost 60% of overall EBITDA by FY26E. This proportion may go up further as the revenue from the recently won new orders flows in.

Exhibit 27: EBITDA contribution from aerospace segment is likely to increase

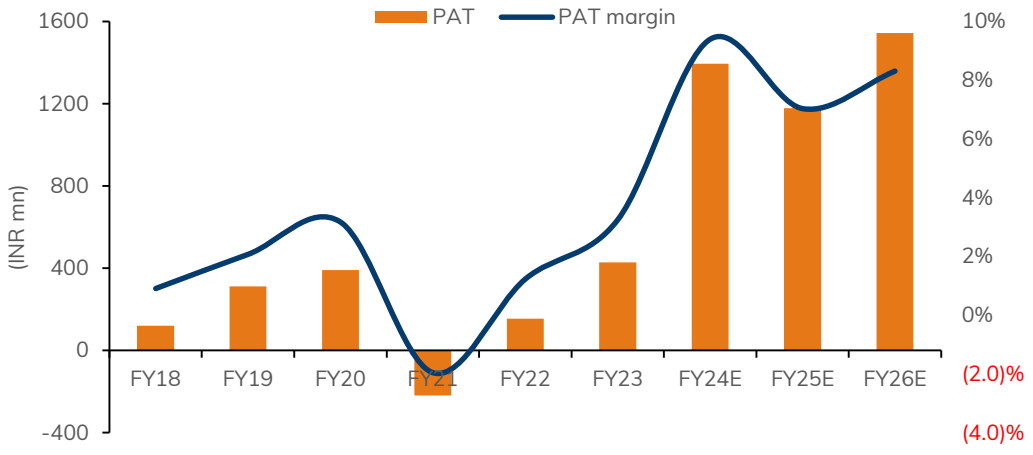


Source: Company data, I-Sec research

PAT margin in FY24 is aided by exceptional gains, to normalise from FY26E

We expect DTL's PAT and PAT margin at INR 1.4bn and 8%, respectively, by FY26E aided by higher revenue share of aerospace & defence segment. Besides, the reduction of debt is pursuant to: 1) Receipt of net gains of INR 346.2mn from approval of restructuring plan at Erla and; 2) an estimated gain of INR 600mn from the sale of wind farms lands (measuring 357.9 acres at Coimbatore to Tamil Nadu Industrial Development Corporation (TIDCO) for setting up of the Southern Defence Industrial Corridor for a compensation of INR 1.07bn) may reduce the interest cost.

Exhibit 28: PAT margin may improve



Source: I-Sec research, Company data

Expect debt to go down from FY24

The external borrowings of the company have largely been range bound at INR 6bn for the past 7-8 years (though term loans have declined over the years) and the average finance cost has declined over the years. During Mar'23, DTL raised INR 1.13bn through the preferential allotment of equity shares and the fund infusion has supported the company's deleveraging efforts.

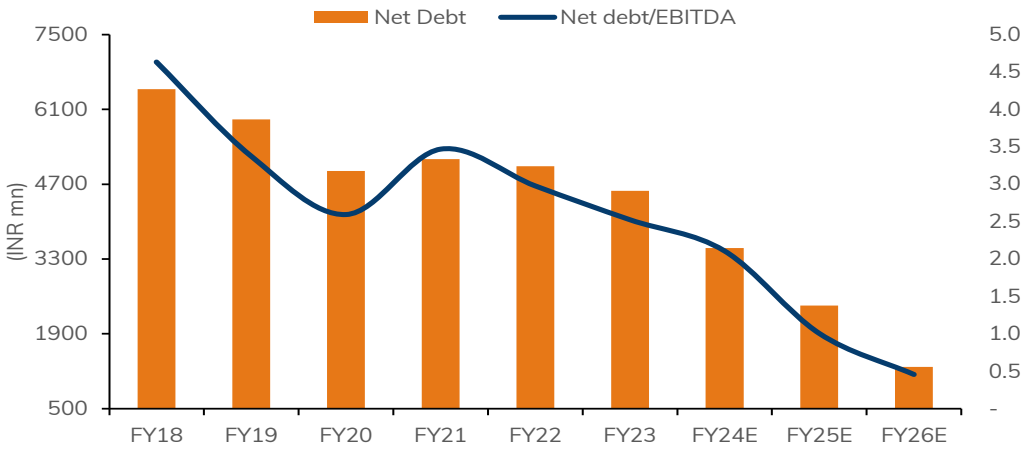
Exhibit 29: Borrowing profile of the company

(INR mn)	FY16	FY17	FY18	FY19	FY20	FY21	FY22	FY23	9MFY24
Long term borrowings	5,038	5,092	4,893	4,432	3,876	4,269	3,781	3,612	3,174
Short term borrowings	920	1,559	2,209	2,160	2,200	1,505	1,654	2,572	2,169
Total external borrowings	**5,958**	**6,651**	**7,102**	**6,592**	**6,075**	**5,774**	**5,435**	**6,184**	**5,343**
Lease liabilities					1,353	1,665	1,432	1,351	1,293
Total liabilities	**5,958**	**6,651**	**7,102**	**6,592**	**7,428**	**7,439**	**6,867**	**7,535**	**6,636**
Finance expenses paid	728	784	744	795	805	700	590	654	
Average cost of borrowings		***11.8%***	***10.7%***	***11.6%***	***11.5%***	***9.4%***	***8.2%***	***9.1%***	

Source: Company data, I-Sec research

The gross debt (external debt) to EBITDA ratio of the company had declined to 3.4x in FY23 (5.1x in FY18) mainly on account of improvement in EBITDA as well as a decline in debt. Going forward, we expect debt to EBITDA to remain at sub 3x levels. As a result of cash inflow from restructuring at Erla in Q1FY24 and receipt of compensation for land in Q4FY24, we expect gross debt to come off by 25% YoY at INR 3.5bn by Mar'24. We expect net debt to further come off as peak capex appears to be over. We expect maintenance capex of INR 300mn over the next couple of years.

Exhibit 30: Net debt may come off and leverage is set to improve



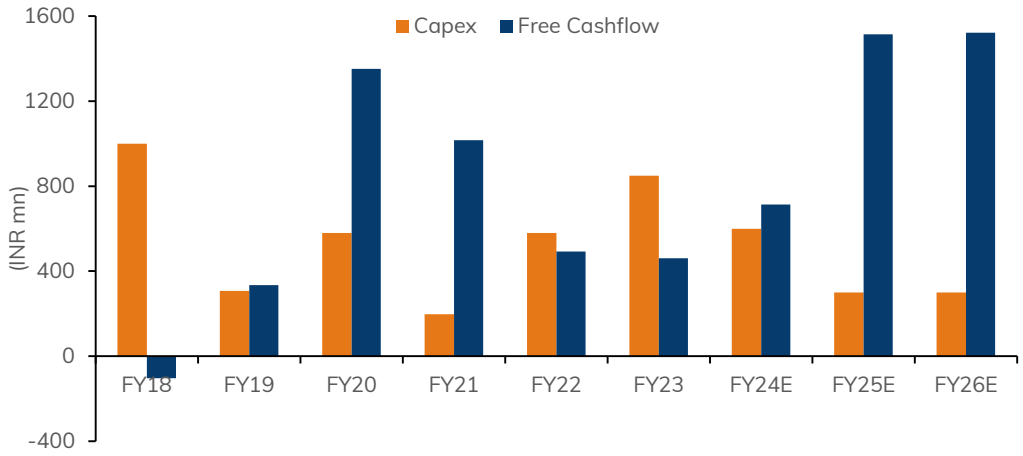
Source: I-Sec research, Company data

Significant FCF generation likely to result in DTL being net cash by FY27E

Unlike its peers in aerospace & defence space, DTL has been free cash positive in all the years since FY19. Cumulatively, DTL has incurred capex of INR 4.75bn in the past seven years and majority of its capex was incurred in aerospace segment. DTL has invested ~INR 1.8bn in aerospace segment in the past six years.

Owing to lower interest repayments and peak capex behind us, we expect substantial free cashflow from FY25E. As a result, we expect DTL to be net cash positive by FY27E.

Exhibit 31: Capex and free cashflow progression



Source: I-Sec research, Company data

RoE and RoCE profile may improve further

The implied RoCE calculation, based on the segmental results of the company, suggests RoCE of hydraulics segment is the highest, while metallurgy segment has witnessed single low digit to negative RoCE.

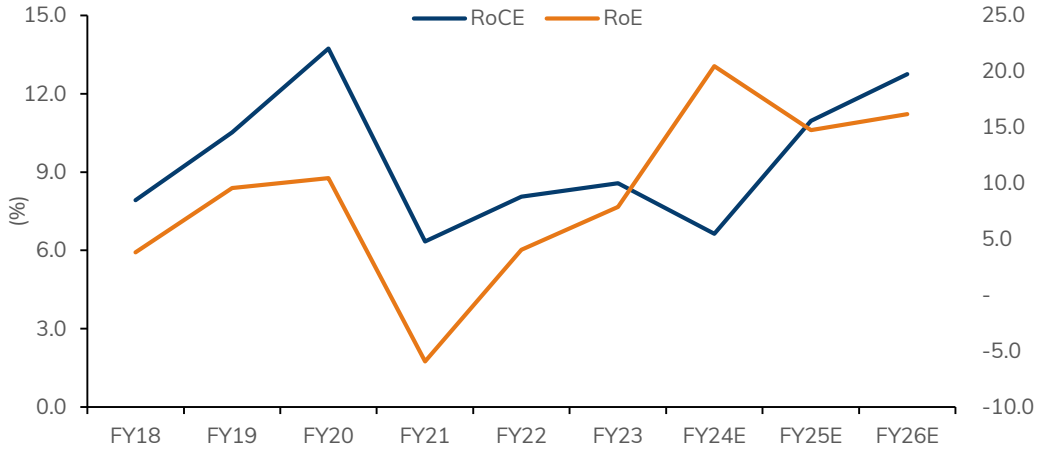
Exhibit 32: Segmental RoCE

RoCE %	FY16	FY17	FY18	FY19	FY20	FY21	FY22	FY23
Hydraulics	18.5	22.9	17.6	20.7	6.1	12.6	36.4	39.6
Aerospace	23.3	26.5	15.1	22.5	25.4	17.9	12.2	14.4
Metallurgy	4.6	1.6	4.7	3.6	2.4	(0.1)	2.4	(0.2)

Source: I-Sec research

Going forward, we believe aerospace segment may witness significant growth in revenue and margins led by the recent contract wins. While aerospace segment is the best, in terms of revenue, EBITDA margin, RoCE profile etc, the performance of other segments is also likely to improve on the back of cost optimisation and improvement at Erla. We expect RoCE and RoE to improve to above 15% by FY26E. That said, we believe the full impact of the recent contract wins on earnings may be visible only post FY27E.

Exhibit 33: RoE and RoCE expected to improve



Source: I-Sec research, Company data

Performance of overseas operational subsidiaries

Eisenwerk Erla and Dynamatic had contributed 37-38% and 26%, respectively, to DTL's consolidated revenue in FY23. The performance of DTL's key operational subsidiaries, Eisenwerk Erla (Germany) (100% shareholding) and Dynamatic Ltd (the UK) (100%), has improved in FY23. Key points: 1) Revenue of Eisenwerk Erla (Germany) declined to EUR 49.8mn in FY23 mainly due to the ongoing Ukraine conflict, which had triggered inflation, surge in gas and electricity cost and supply-chain disruptions across Europe; 2) revenue of DTL (UK) improved to GBP 34.4mn (GBP 24mn in FY22), driven largely by the revenues from new projects, which moved from limited to full scale production, improved tractor market demand in the US and better supply chain; 3) Eisenwerk is currently in the process of transformation from an automotive/foundry-focus to aerospace business; 4) Dynamatic-Oldland Aerospace® division in the UK continues to prosper with a good mix of business across a varied range of aircraft in commercial and military markets, and has achieved sales of GBP 20.2mn in FY23.

Eisenwerk Erla (Germany)

Revenue of Eisenwerk Erla (Germany) declined to EUR 49.8mn in FY23 mainly due to the ongoing Ukraine conflict, which had triggered inflation, supply-chain disruptions for OEMs and unpredictable surge in gas and electricity costs for corporations across Europe, particularly in Germany. However, the German Government's protective policies and support for industry have helped the company minimise the impact and at the end, the situation showed improvement in revenue due to successful negotiations for price increase from all customers.

DTL plans to expand its operations significantly in Germany and is currently in the process of transformation from an automotive/foundry-focus to aerospace business. Considering the various challenges such as supply-chain crisis at OEMs, current inflation in Europe, steep and unpredictable increase in the cost of gas and electricity being faced by corporations across Europe, Eisenwerk undertook corporate restructuring measures through **'Protective Shield process by self -administration'** under applicable German Laws. We believe the company is entitled to additional revenue from its customers under the government's protective shield policy.

Exhibit 34: Key financial numbers (KFIs) of Eisenwrek Erla

(in EUR mn)	FY20	FY21	FY22
Net Sales	55.0	51.3	53.8
Gross Margin	18.6	15.2	16.4
Gross Margin (%)	33.7%	29.6%	30.5%
EBITDA	3.0	1.0	1.2
EBITDA Margin (%)	5.4%	2.0%	2.3%
PAT	-3.9	-1.8	1.0
PAT Margin (%)	-7.0%	-3.5%	1.9%

Source: Company data, I-Sec research

Dynamatic Limited (UK)

DTL (UK) has achieved a revenue of GBP 34.4mn (up 43% YoY) and EBITDA grew to GBP 6mn (up 131% YoY). This growth was driven largely by the revenues from new projects which moved from limited to full scale production, improved tractor market in the US and better supply chain. Dynamatic has continued its cost optimisation and risk mitigation initiatives which reflects in its overall performance. The supply-chain situation in Europe and UK have improved significantly post covid-19 led disruptions. However, due to high inflation and increased power cost, margins may be under tremendous pressure in the near term.

Dynamatic-Oldland Aerospace® division in the UK continues to prosper with a good mix of business across a varied range of aircraft in commercial and military markets. This includes Airbus Flap track parts for A318, A319, A320, A321 & A330, Airbus - flaps, landing gear, wing structural items for A400M & A330. C130J engine structural parts, plus the Boeing Chinook pylon and ramp monolithic machined components.

Exhibit 35: Key financial numbers (KFIs) of Dynamatic Limited (UK)

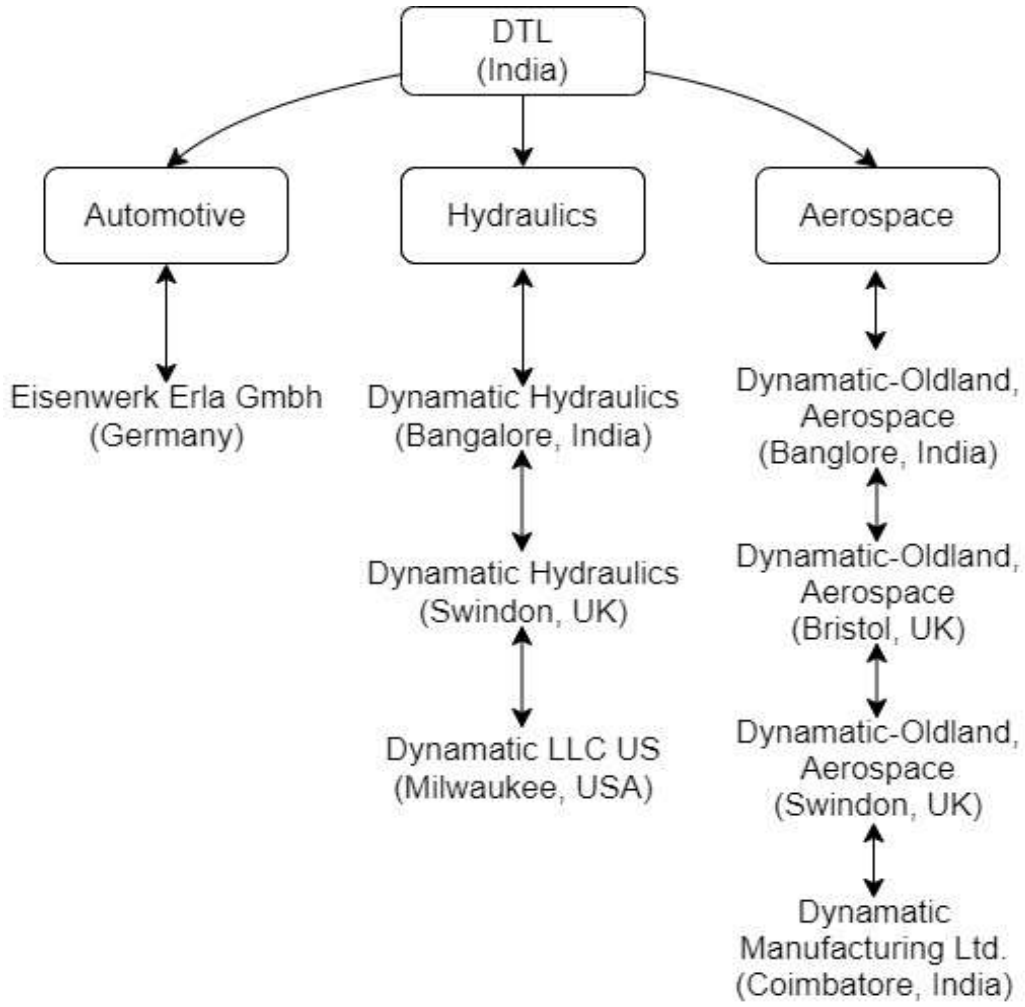
(GBP mn)	FY19	FY20	FY21	FY22	FY23
Net Sales	28.8	26.8	17.7	24.0	34.4
Gross Margin	15.8	13.9	10.0	13.2	18.7
Gross Margin (%)	54.9%	51.9%	56.5%	55.0%	54.5%
EBITDA	1.9	2.1	0.9	2.6	6.0
EBITDA Margin (%)	6.5%	7.7%	4.9%	10.8%	17.4%
PAT	0.6	-0.7	-1.7	-0.5	2.2
PAT Margin (%)	2.0%	-2.6%	-9.8%	-2.0%	6.5%
Gross Debt	3.2	2.6	4.3	7.5	8.8
Net Debt	3.1	1.4	2.4	7.1	8.6
Capital Employed	22.5	21.0	21.0	23.7	27.6
Working capital as % of sales	20.9%	12.2%	15.8%	10.2%	11.6%
RoCE %	3.6%	-1.9%	-7.0%	-0.1%	11.6%

Source: Company data, I-Sec research

Business Profile

DTL operates in three business segments: i) Hydraulics, ii) aerospace & defence and iii) metallurgy. While each of the segment contributes ~1/3rd of the revenue, aerospace contributed >50% of its EBITDA, followed by hydraulics contributing ~39% of EBITDA and metallurgy contributing ~8% over FY20-FY23.

Exhibit 36: Organisation structure



Source: I-Sec research, Company data

Aerospace & defence: DTL manufactures precision flight critical, complex airframe structures and aerospace components. It is a tier-I supplier to global aerospace OEMs and primes such as Airbus, Boeing, BEL, Bell Helicopters, Dassault Aviation, Hindustan Aeronautics Limited and Spirit Aero systems. The company designs and builds unmanned aerial, unmanned & manned ground Intelligence Surveillance & Reconnaissance (ISR) platforms for military and paramilitary.

Hydraulics segment: DTL is one of the world's largest manufacturers of hydraulic gear pumps with over 1.5mn pumps produced among its facilities in India and overseas. As per the annual report, **DTL has ~80% share of the Indian OEM tractor market and ~38% of the global tractor market.**

Metallurgy: DTL manufactures high quality ferrous and non-ferrous automotive components for highway, off-highway and technology-oriented applications for leading global automotive OEMs. The company has modern ferrous, non-ferrous foundries and modern state-of-the-art automotive component manufacturing facilities in India and Germany.

Exhibit 37: Segmental numbers

(INR mn)	FY17	FY18	FY19	FY20	FY21	FY22	FY23	9MFY24
Aerospace – Segment								
Revenue	3,457	3,564	4,689	4,976	3,740	3,601	4,374	3,682
EBITDA	1,047	814	1,168	1,525	1,113	990	1,168	764
EBITDA Margin (%)	30.3%	22.9%	24.9%	30.7%	29.8%	27.5%	26.7%	20.7%
Hydraulics – Segment								
Revenue	2,768	3,155	3,631	2,950	2,976	4,237	4,617	3,259
EBITDA	398	371	416	229	311	732	875	307
EBITDA Margin (%)	14.4%	11.7%	11.4%	7.7%	10.4%	17.3%	18.9%	9.4%
Metallurgy – Segment								
Revenue	8,836	6,556	6,683	4,350	4,419	4,650	4,166	3,647
EBITDA	294	257	251	297	182	203	171	231
EBITDA Margin (%)	3.3%	3.9%	3.8%	6.8%	4.1%	4.4%	4.1%	6.3%

Source: I-Sec research, Company data

Historically, EBITDA margin of aerospace segment is >20%, while hydraulics segment margin has been volatile. Metallurgical segment's EBITDA margin stands at ~4-6% over FY16-23. FY23 has witnessed the highest margin (in the last 5 years) in aerospace and hydraulics segments led by better revenue mix, while metallurgical segment witnessed a decline in margin due to increased input costs.

The European market (incl. UK) contributes 55% of the revenue, while domestic market contributes ~25%; USA's contribution is ~11-12%. DTL's majority metallurgical segment revenue comes from European market.

Aerospace & defence segment

DTL manufactures precision flight critical, complex airframe structures and aerospace components. It is a tier-I supplier to global aerospace OEMs and primes such as Airbus, Boeing, BEL, Bell Helicopters, Dassault Aviation, Hindustan Aeronautics Limited and Spirit Aero systems. DTL has been supplying flight critical FTBs assemblies to Airbus for the past 17 years, first as tier II and then as tier I. Details of its key facilities are mentioned below.

Exhibit 38: Key facilities of the company

Facility	Brief details
DYNAMATIC-OLDLAND AEROSPACE®, India (Indian Facility)	Its products include the wing and rear fuselage of the India's pilotless target aircraft - LAKSHYA, the Ailerons & wing flaps for the Intermediate Jet Trainer HJT-36 and major airframe structures for the Sukhoi 30 MKI. The company also works closely with EADS and Spirit AeroSystems to assemble flap track beams for the Airbus Single Aisle A-320 Family of Aircrafts on a single source basis. **This is the first time that a functional aero-structure of a major commercial jet is being manufactured in the Indian private sector**. The company has state-of-art facilities for heat treatment of aluminum alloys, fluorescent penetrant inspection, resistant spot welding and measurement and inspection (CMM, laser tracker and articulated arm) which are NADCAP accredited and approved by primes like Airbus, Boeing, Bell Helicopter and HAL.
DYNAMATIC-OLDLAND AEROSPACE®, UK (United Kingdom (UK) Facility)	The UK manufacturing facility is a state-of-the-art aeronautical manufacturing facility with complex 5 axis machining capabilities for the manufacturing of aerospace components and tooling. This high-end precision engineering company is a certified supplier to Airbus UK, Boeing, GKN Aerospace, Magellan Aerospace, GE Aviation Systems, Lockheed Martin, Agusta Westland, Spirit AeroSystems (UK).
Dynamatic Manufacturing Limited (DML)	DML is a subsidiary of Dynamatic Technologies Limited (DTL). DML will be involved in engineering, manufacturing, and delivering components for different aircraft parts.

Source: I-Sec research, Company data

Details of key aerospace products manufactured by DTL

For Airbus: DTL is the world's largest single source supplier of the FTBs for Airbus. It currently supplies (single source) FTBs for A-320 family (A318, A319, A320 & A321) and A330 family. These FTBs are class-1 Flight Critical Assemblies that are connected to wings. DTL has delivered more than 7,000 aircraft sets of FTBs till date and has also successfully completed the A320 re-design of the FTB with a monolithic structure working closely with Spirit Aero Systems. The company delivers close to 800 aircraft ship sets annually, making it the largest producer of FTBs globally. Further in FY23 (June'22), DTL won the contract to manufacture the Escape Hatch Door (EHD) for Airbus A220 aircraft. The contract was placed by the recently established Stelia Aeronautique Canada Inc., a subsidiary of Airbus Atlantic SAS. In Feb'24, the company announced a new contract with Airbus to manufacture and supply the main passenger doors, service doors, cargo doors and over-wing emergency exit doors for the A-220 aircraft. The management mentioned: "This export award is amongst the largest ever placed on an Indian manufacturer by any global aviation OEM, and is a strong testament to Make-In-India. Company is delighted to have been chosen by Airbus to produce the doors for the A220, which is the most advanced and efficient aircraft in its class".

For Boeing: DTL is the sole global supplier of power and mission cabinets for Boeing's P8 Poseidon aircraft. The company manufacturers the Aft Pylon Assembly and Cargo Ramp Assembly for CH-47 Chinook helicopters. This is the Boeing's largest export programme out of India. DTL has been awarded a contract for manufacturing assemblies for Boeing's newest tactical fighter, F-15EX Eagle II. This is the first time when aero structures for the latest and most advanced F-15EX Eagle II will be made in India. DTL has recently delivered Boeing MQ25 whiffletree assemblies. These whiffletree assemblies are for static and fatigue testing of control surfaces of the MQ25 Unmanned Fueler Aircraft Program.

For Hindustan Aeronautics: DTL is a work share partner on the Su-30MKI. Over 1/6th of the airframe structure including critical control surfaces are manufactured by DTL. Further, DTL has been chosen as the supplier for Tejas LCA's Front Fuselage Assembly from HAL. This is a long-term contract for DTL, which includes manufacturing of detailed parts and assemblies along with jigs and fixture equipment.

For Bell: Bell 407 is one of the world's largest selling helicopters. DTL has been contracted as a single source supplier of major airframe assemblies for Bell 407 Helicopter for the 'life of programme'.

Exhibit 39: Journey of DTL in aerospace & defence (some examples)

Key Product	Achievements
Arjun Main Battle Tank Intermediate Jet Trainer HJT-36 Sukhoi 30 MKI LCA-Tejas	In the early 1990s, following the collapse of the USSR, Dynamatic partnered with the MoD to indigenise critical hydraulic transmission systems, steering control system, turret control system, brake actuating system on T-72 Battle Tank. Subsequently, Dynamatic became a developmental partner with the DRDO on Arjun Main Battle Tank. This was the first defence programme of Dynamatic Technologies in 1993-94. Further, DTL had manufactured rear fuselage and wing for Lakshya Pilotless Target Aircraft (PTA) programme during 1995-98. During 1999-2000, DTL was the developmental partner with HAL for development and prototyping of Ailerons & Flaps of Intermediate Jet Trainer HJT-36. In 2004, DTL became a work-share partner with HAL on the Sukhoi 30MKI for major control surface assemblies. Over 1/6th of the airframe structure, including critical control surfaces were manufactured at its facility co-located at HAL-Nasik, and was the largest PPP for manufacturing between HAL and an Indian private sector. In 2015, DTL became a supplier for Tejas assembly for HAL and inaugurated front fuselage assembly line facility and in Nov' 20, it received the Final Operation Clearance (FOC) configuration for HAL. This is a long-term contract, which includes manufacturing of detailed parts and assemblies along with jigs and fixture requirements. This is the first time a complex fuselage section for a supersonic fighter aircraft was built by a private sector company.
BEL	In Oct'20, DTL supplied the first batch of critical beam assemblies for complex naval application to Bharat Electronics Limited.
Flap-Track-Beam assemblies	DTL started its Airbus Single Aisle programme (Flap-Track-Beam assemblies) in 2007-08. It is the sole supplier of Class 1, flight critical Flap-Track-Beam assemblies for every major variant of Airbus aircraft produced worldwide. DTL delivers close to 800 aircraft ship sets annually, making it the largest producer of FTBs globally.
Arjun Main Battle Tank Intermediate Jet Trainer HJT-36 Sukhoi 30 MKI	In the early 1990s, following the collapse of the USSR, Dynamatic partnered with the MoD to indigenise critical hydraulic transmission systems, steering control system, turret control system, brake actuating system on T-72 Battle Tank. Subsequently, Dynamatic became a developmental partner with the DRDO on Arjun Main Battle Tank. This was the first defence programme of Dynamatic Technologies in 1993-94. Further, DTL had manufactured rear fuselage and wing for Lakshya Pilotless Target Aircraft (PTA) program during 1995-98. During 1999-2000, DTL was the developmental partner with HAL for development and prototyping of Ailerons & Flaps of Intermediate Jet Trainer HJT-36. In 2004, DTL became a work-share partner with HAL on the Sukhoi 30MKI for major control surface assemblies. Over 1/6th of the airframe structure, including critical control surfaces were manufactured at its facility co-located at HAL-Nasik, and was the largest PPP for manufacturing between HAL and an Indian private sector.
LCA-Tejas	In 2015, DTL became a supplier for Tejas assembly for HAL and inaugurated front fuselage assembly line facility and in Nov' 20, it received Final Operation Clearance (FOC) configuration for HAL. This is a long-term contract, which includes manufacturing of detailed parts and assemblies along with jigs and fixture requirements. This is the first time a complex fuselage section for a supersonic fighter aircraft was built by a private sector company.

Source: I-Sec research, Company data

Exhibit 40: Aerospace journey – Indian customers

Source: I-Sec research, Company data

Exhibit 41: Major achievements of DTL in the recent past

Key Product	Achievements
Dynamatic delivers Boeing MQ25 whiffletree assemblies	The MQ25 unmanned aircraft is an all-air refuelling drone designed by Boeing for the US Navy. The aircraft will provide robust refuelling capability, thereby, extending the combat range of the deployed Boeing F/A- 18 Super Hornet, Boeing EA-18G Growler, and Lockheed Martin F-35C fighters. DTL has delivered MQ25 whiffletree assemblies. These whiffletree assemblies are for static and fatigue testing of control surfaces of MQ25 Unmanned Fueler Aircraft Program. Around 20 tons of tool steel material has been converted into 3,784 parts/ 2,900 bearings/ 3,100 bushes, and 22,000 fasteners, which have been engaged to assemble 32 heavy assemblies in 100 days with a quick turnaround.
DTL delivers Boeing F15ex assemblies A321- Xlr (long range)	DTL designed and delivered Boeing F15EX assemblies, which involved developing 3D models, tooling for detail parts and assembly, and manufacturing detailed parts and assembly in record time by adapting APQP methodology. This is the first time the company is partnering with Boeing for a supersonic fighter jet programme. AIRBUS A-321 series Beam 2 Flap Track is modified to the current design of A320 Flap Track Beams. DTL will continue to build both current design and XLR for A321 series.
DTL completes 200th ship sets of Airbus long range flap track beams DTL signs the contract for the manufacturing of escape hatch door for A220 aircraft	DTL is the single source manufacturer of Flap-Track-Beam assemblies for Airbus wide bodied aircraft A-330. DTL has won the contract to manufacture the Escape Hatch Door for Airbus A220 aircraft. This contract marks a milestone in the workshare of A-220 supply chain in India.
DTL to supply Airbus A-220 doors	In Feb'24, DTL has announced a new contract with Airbus to manufacture and supply the main passenger doors, service doors, cargo doors and over-wing emergency exit doors for the A-220 aircraft.
Bell 407 fuselage assembly parts	DTL has successfully indigenised the manufacturing of major helicopter assemblies in collaboration with Bell Helicopter. Dynamatic is approved for the necessary Bell processes, which are unique for manufacturing of these aero structures. Dynamatic has the capacity to produce 9 sets of aft fuselage, turnover bulkhead, nose, roof, and beam assemblies, and its on-time delivery rating is 100%. Bell has renewed the contract for the next 5 years, until 2027. This includes the supply of detailed parts and assemblies.
DTL delivers Boeing F15ex assemblies	DTL designed and delivered Boeing F15EX assemblies, which involved developing 3D models, tooling for detailed parts and assembly, and manufacturing detailed parts and assembly in record time by adapting APQP methodology. This is the first time the company is partnering with Boeing for a supersonic fighter jet programme.
A321- Xlr (long range) DTL completes 200th ship sets of AIRBUS long range flap track beams	Airbus A-321 series Beam 2 Flap Track is modified to the current design of A320 Flap Track Beams. DTL will continue to build both current design and XLR for A321 series. DTL is the single source manufacturer of Flap-Track-Beam assemblies for Airbus wide bodied aircraft A-330.

Source: I-Sec research, Company data

DTL-Airbus partnership

DTL is the world's largest single source supplier of the FTBs for Airbus. It currently supplies (single source) FTBs for A-320 family (A318, A319, A320 & A321) and A330 family. Further in FY23 (June'22), DTL won the contract to manufacture the Escape Hatch Door (EHD) for Airbus A220 aircraft. In Feb'24, the company announced a new contract with Airbus to manufacture and supply the main passenger doors, service doors, cargo doors and over-wing emergency exit doors for A-220 aircraft.

DTL is the single source supplier of Flap-Track-Beam (FTB) for Airbus A-320 family and A-330 family aircraft

DTL is the world's largest single source supplier of the FTBs for Airbus. It currently supplies (single source) FTBs for A-320 family (A318, A319, A320 & A321) and A330 family. These FTBs are class-1 Flight Critical Assemblies that are connected to wings. DTL has delivered more than 7,000 aircraft sets of FTBs till date and has also successfully completed the A320 re-design of the FTB with a monolithic structure working closely with Spirit Aero Systems. **The company delivers close to 800 aircraft ship sets annually**, making it the largest producer of FTBs globally.

Airbus has delivered 735 commercial aircraft globally (up 11% YoY) in CY23 (aircraft type comprised 68 nos. of A220 family (53 nos. in CY22), 571 nos. of A320 family (516 nos. in CY22) (DTL's FTBs), 32 nos. of A330 family (DTL's FTBs) (32 nos. in CY22) and 64 nos. of A350 family (60 nos. in CY22)) and the commercial aircraft business registered 2,319 gross new orders (2,094 net) in CY23. The CY23-end order backlog stands at 8,598 aircraft, majority of which is for A320 family.

As per Global Market Forecast (GMF-23) of Airbus: "*Passenger traffic growth is expected to be ~3.6% (2019-2042 CAGR) and freight traffic is expected to grow of ~3.2% (2019-2042 CAGR). Further, fleet in service in the beginning of 2020 was ~22,880 aircraft and is expected to increase to ~46,560 aircraft by 2042;* ***new deliveries are expected to be 40,850 aircraft over the next 20 years***".

Exhibit 42: Annual order summary of Airbus aircraft of past 8 years

New Orders (net of cancellation)	CY16	CY17	CY18	CY19	CY20	CY21	CY22	CY23
A220	0	0	135	63	30	38	105	141
A320Family	607	1,054	541	654	263	437	770	1,675
A330	83	21	27	89	-14	30	-65	-3
A350	41	36	40	32	-11	2	10	281
Net orders inflow	731	1,111	743	838	268	507	820	2,094

Source: I-Sec research, Airbus

Exhibit 43: Order backlog of Airbus (Dec'23 end)

As on Dec'23end	No. of aircrafts	% of total aircraft
Order Book	8,598	100%
A- 320	7,195	84%
A- 220	602	7%
A- 350	621	7%
A- 330	180	2%

Source: I-Sec research, Airbus

As mentioned in the above tables, DTL supplies FTBs to A-320 family, which comprises ~84% of total order backlog of Airbus. New order inflow has been the highest in CY23 with net order inflow of ~1675 A-320 family aircraft which translates into new order to delivery ratio of 2.9x (highest) and order book to bill of 12.6 (highest). This provides sufficient revenue visibility over the next 10-12 years as Airbus has more than 7,000 aircraft under its order backlog of A-320 family.

Going forward, we believe, DTL is in an advantageous position with surge in orderbook of A320 family, for which it is the single source supplier of FTBs. Also, as per GMF-23, Airbus mentioned new deliveries are likelyto be 40,850 aircraft over the next 20 years, which denotes positive outlook for DTL.

Encashing new opportunities; DTL to supply Airbus A-220 doors (opportunity size is expected to be ~INR 40bn)

DTL has been supplying flight critical FTBs assemblies to Airbus for the past 17 years, first as tier II and then as tier I. Today, it produces FTB assemblies on a global single source basis directly for A330 aircraft and indirectly for A320 family aircraft.

In Feb'24, the company announced a new contract with Airbus to manufacture and supply the main passenger doors, service doors, cargo doors and over-wing emergency exit doors for the A-220 aircrafts. The management mentioned: "*This export award is amongst the largest ever placed on an Indian manufacturer by any global aviation OEM, and is a strong testament to Make-In-India. Company is delighted to have been chosen by Airbus to produce the doors for the A220, which is the most advanced and efficient aircraft in its class*".

Manufacturing Escape Hatch Door (EHD) for Airbus A220 aircraft

In FY23 (June'22), DTL won the contract to manufacture the Escape Hatch Door (EHD) for Airbus A220 aircraft. The contract was placed by Stelia Aeronautique Canada Inc., a subsidiary of Airbus Atlantic SAS. This contract marks a significant milestone in the workshare of A-220 supply chain in India and extends company's capabilities for manufacturing critical aero structure for Airbus. Further, DTL has modified Airbus A-321 series Beam 2 Flap Track to the current design of A-320 FTB.

Exhibit 44: Orderbook and backlog of A-220 aircraft of Airbus (DTL's point of view)

A-220 family	CY18	CY19	CY20	CY21	CY22	CY23
Net order	135	63	30	38	105	141
Delivery	20	48	38	50	53	68
New order to delivery (times)	6.8	1.3	0.8	0.8	2.0	2.1
Order Back log	482	497	489	477	529	602
Book to bill (times)	24.1	10.4	12.9	9.5	10.0	8.9

Source: I-Sec research, Airbus

Boeing-DTL partnership

In 2010, Boeing team visited facilities of the company and DTL supplied power and mission cabinets for Boeing's P8 Poseidon aircraft in the same year. The Chinook program started in 2013 (first set delivered in 2015).

DTL is the sole global supplier of power and mission cabinets for Boeing's P8 Poseidon aircraft. The company manufacturers the Aft Pylon Assembly and Cargo Ramp Assembly for CH-47 Chinook helicopters. This is the Boeing's largest export programme out of India. DTL has been awarded a contract for manufacturing assemblies for Boeing's newest tactical fighter, F-15EX Eagle II. This is the first time when aero structures for the latest and most advanced F-15EX Eagle II will be made in India. DTL has recently delivered Boeing MQ25 whiffletree assemblies. These whiffletree assemblies are for static and fatigue testing of control surfaces of the MQ25 Unmanned Fueler Aircraft Program.

Exhibit 45: Key platforms delivered/ordered by/for Boeing's defence platforms

(units)	CY15	CY16	CY17	CY18	CY19	CY20	CY21	CY22
P8 Poseidon								
Orders	86	92	128	112	94	97	97	85
Delivery	14	18	19	16	18	15	16	12
CH-47 Chinook								
Delivery	57	50	44	30	35	30	30	28
T-7A Red Hawk								
Orders				351	351	351	351	350
Delivery								1
F-15 Models								
Delivery	12	15	16	10	11	4	16	12

Source: I-Sec research, Boeing

Exhibit 46: Key Boeing platforms and DTL's contribution

Platform	Outlook
Boeing MQ25	In 2021, Boeing and the US Navy conducted three historic un-crewed aerial refuelling missions with the MQ-25 T1 test asset, transferring fuel for the first time to an F/A-18 Super Hornet, E-2D Hawkeye and F-35C Lightning II. The F/A-18 flight marked the first time in history an un-crewed aircraft refuelled another aircraft. Following this, Boeing has announced a new USD 200mn, 300,000-sq-ft MQ-25 production facility, scheduled for completion in CY24 at Mid America St. Louis Airport in Illinois. In 2020, the US Navy exercised an option for three additional MQ-25s, the service's first operational carrier-based un-crewed aircraft. Boeing is manufacturing seven aircraft and two test articles under the initial contract awarded in 2018, and ***the US Navy's stated requirement is for >70 nos. of MQ-25s***. ***DTL contribution:*** *DTL has delivered Boeing MQ25 whiffletree assemblies (these whiffletree assemblies are for static and fatigue testing of control surfaces of the MQ25 Unmanned Fueler Aircraft Program).*
Boeing F-15EX	Boeing's defence platform includes the digitally transformed F-15EX Eagle II; the Block III F/A-18 Super Hornet and F/A-18 Super Hornets that have gone through the Service Life Modification (SLM) line; the EA-18G Growler; and the T-7A advanced pilot training system. Two F-15EX Eagle II were delivered to the US Air Force in 2021 ahead of the schedule and performed full-scale operational testing six months later, achieving impressive results with their advanced survivability, weapons payload and networking capabilities. ***DTL contribution:*** *DTL has designed and delivered Boeing F-15EX assemblies, which involved developing 3D models, tooling for detailed parts and assembly, and manufacturing detailed parts and assembly in record time by adapting APQP methodology*
T-7A Red Hawk	After the US Air Force awarded Boeing the Advanced Pilot Training System contract in 2018, T-X aircraft was officially named the T-7A Red Hawk in 2019. The contract is for 351 jets, 46 high-resolution simulators and associated ground equipment. To date, more than 450 successful engineering and manufacturing development flight tests have been accomplished at the advanced trainer stages for initial production. The first EMD T-7A Red Hawk was officially rolled out for the US Air Force on Apr 28, '22. ***DTL contribution:*** *DTL has been awarded a contract for the delivery of tools for static and fatigue testing of control surfaces of Boeing- SAAB T-7A Red Hawk Program.*
CH-47 Chinook Helicopters	In 2022, Boeing achieved two key international vertical lift down-select awards. In Jun'23, Germany selected the Chinook (60 aircraft) as its future heavy-lift aircraft, and in Sep'23, the Polish government chose the Apache (96 aircraft) as its upcoming attack helicopter. For Chinook, Boeing received awards to produce six more MH-47G aircraft and two more CH-47F Block II. In Dec'23, Boeing also received a contract to produce two more Block I Chinooks for the Army and 12 for the Egyptian Air Force. ***DTL contribution:*** *The company manufacturers the Aft Pylon Assembly and Cargo Ramp Assembly. This is Boeing Defence system's largest export programme out of India.*
P8 Poseidon Maritime Reconnaissance Aircraft	In Feb'22, Boeing delivered the 12th P-8I, which was the fourth aircraft to be delivered under an option contract for four additional aircraft that the Indian MoD placed in 2016. The P-8 program has delivered nine of nine P-8A Poseidon aircraft to the United Kingdom and five of five P-8A Poseidon aircraft to Norway. In Dec'22, Boeing delivered the first P-8A to New Zealand. This delivery also marked the 155th P-8 aircraft delivered to global customers. First deliveries to Korea and Germany are scheduled to take place in CY23 and CY24, respectively. **DTL contribution:** *The company is the sole global supplier of power and mission cabinets for Boeing's P8 Poseidon Maritime Reconnaissance Aircraft.*

Source: I-Sec research, Boeing annual report

DTL's defence segment

DTL builds cutting edge security solutions for countering modern day security threats. The company designs and builds unmanned aerial, unmanned & manned ground Intelligence Surveillance & Reconnaissance (ISR) platforms for military and paramilitary. It has DSIR (Department for Scientific & Industrial Research) approved R&D capabilities critical for developing cutting edge security solutions.

Unmanned Aerial Vehicles (UAVs)

DTL has partnered with Israel Aerospace Industries (IAI) for manufacturing UAVs in India. The company has entered into a tripartite agreement with IAI and HAL for manufacturing, sales and service of large UAVs in India to cater to the requirements of Indian defence and CAPF. IAI is a globally recognised leader in the delivery of state-of-the-art systems for defence and commercial markets. It offers unique solutions for a broad spectrum of requirements in space, air, land, sea, cyber, and HLS.

IAI is today a world leader in UAVs with over 1,400,000 accumulated operational flight hours. Indian Military is effectively using HERONS & SEARCHER UAVs from IAI, in surveillance missions in high-altitude mountainous region and also for acquiring critical information to manoeuvre elements in the country's western deserts.

Dynamatic KRISH-E: An indigenously designed and built multi-rotor UAV

Dynamatic Krish-E is an indigenously designed and built multi-rotor UAV for farm application and is aimed at spraying pesticides, water, seeds, weed-removal, crop and soil condition monitoring. The current version weighs 30 kg (with payload of 7 kg) and has an endurance of 20 minutes. This is being offered to farming sector and the company intends to start the production soon. The entire development including the software and UI has been done in-house with focus on ease of operation and reliability.

Exhibit 47: Key financials of aerospace & defence segment

Aerospace (INR mn)	FY18	FY19	FY20	FY21	FY22	FY23	9MFY24
Revenue % to consol. Revenue	26.8%	31.3%	40.5%	33.4%	28.7%	33.2%	
Revenue	3,564	4,689	4,977	3,740	3,602	4,373	3682
EBIT	682	1,026	1,120	781	565	791	764
EBIT Margin (%)	**19.1%**	**21.9%**	**22.5%**	**20.9%**	**15.7%**	**18.1%**	**20.7%**
Segment Assets	5,222	5,185	6,048	5,743	5,964	6,678	
Segment Liabilities	704	624	1,644	1,379	1,340	1,184	
Capital Employed	4,517	4,560	4,404	4,364	4,624	5,493	
RoCE (%)	**15.1%**	**22.5%**	**25.4%**	**17.9%**	**12.2%**	**14.4%**	

Source: I-Sec research, Company data

Exhibit 48: Performance of aerospace segment over the years

Previous years	Key comments on the performance
9MFY24	Aerospace segment witnessed modest growth supported by strong commercial orderbook and slight improvements in supply chain. The aerospace segment reported a growth of 15.8% YoY in 9MFY24 driven by resilient performance of the aviation industry. Commercial deliveries and ramp-up of parts for F-15EX Eagle started and First Article build of Escape Hatch Doors for Airbus A220 aircraft is completed as planned. The same will contribute to the new business opportunities and a strong orderbook by major aircraft producers will drive both defence and commercial coupled with the recently announced contract with Airbus Aerostructures to produce high-volume detail parts and Airbus doors.
FY23	In FY23, aerospace segment witnessed moderate growth supported by improvement in order execution and delivery. The segment reported a growth of 21.4% YoY driven by resilient performance of air transport industry. Ramp-up of assemblies for F-15EX Eagle and commercial deliveries of Escape Hatch Doors for Airbus A220 aircraft will start in coming quarters and will contribute to the topline and new business opportunities.
FY22	In FY22, aerospace segment was impacted primarily by the pandemic-led travel-related restrictions. Various travel bans between countries and a decline in passenger traffic due to covid-19 continued to impact the performance of civil aviation sector. The performance of the segment was impacted by global supply chain related challenges and manpower shortage in ancillary industries. The company was awarded an order from Boeing for manufacturing assemblies for its tactical fighter, F-15EX Eagle II.
FY21	In FY21, aerospace segment was impacted primarily due to travel-related restrictions and pandemic. Various travel bans between countries and a decline in passenger traffic due to covid-19 continued to impact the performance of civil aviation sector. The company won orders from the Indian DPSUs to mitigate the slowdown in civil aviation sector.
FY20	In FY20, aerospace segment was impacted owing to covid, which led to a drop demand primarily because of customer order deferment. Continuing orderbook execution and delivery led to revenue growth in FY20, in particular, ramp up of orders from Bell helicopters. The last quarter was partially impacted by covid-induced lockdowns and subsequent postponement of deliveries.
FY19	In FY19, aerospace segment's continuous orderbook execution and delivery led to substantial revenue growth, in particular, ramp up of orders for Bell helicopters.

Source: I-Sec research

Hydraulics segment

World's largest hydraulic gear pumps manufacturer with >1/3rd of global (organised) market share

DTL is one of the world's largest manufacturers of hydraulic gear pumps with over 1.5mn pumps produced among its facilities in India and overseas. The company has leadership position in hydraulic gear pumps market for over 45 years. DTL also manufactures automotive turbochargers. It has the capability to build customised solutions for any application ranging from farm mechanisation - agricultural tractors and harvesters, off-highway vehicles, construction equipment, metal cutting & metal forming, material handling and mining equipment. The company has one of the most expansive ranges of pumps (gear pumps, axial piston pumps in aluminium and cast iron construction) for the most rigorous hydraulic applications and designed bespoke for pressure, flow, efficiency, size, weight and noise requirements. It also designs and builds a wide range of control valves, rockshaft assemblies and integrated hydraulic solutions. As per the annual report, **DTL has ~80% share of the Indian OEM tractor (organised) market and ~38% of the global tractor (organised) market.**

The product portfolio includes aluminium body, hydraulic gear pumps and motors from low to very high pressure ratings, integrated gear and piston pump packages designed for energy saving and overall equipment, heavy duty yet compact cast iron gear pumps, fan drive motors with integrated control valves and a wide range of valves for pressure and flow controls for use on integrated hydraulic packages. Details of the product profile is mentioned in Annexure 1.

Manufacturing facilities: The company has three state-of-art manufacturing facilities located in: i) India (Bengaluru), ii) UK (Swindon) and iii) USA (Milwaukee). Its facilities in the UK and India are ISO 9001:2015 certified; Indian facility is also certified with ISO 14001:2015 and ISO 45001:2018.

Exhibit 49: Details of plants/facilities

Place	Brief details
Bangalore (India)	It manufactures a wide range of sophisticated hydraulic valves and custom tailored hydraulic solutions extending from simple hydraulic pumping units to complex marine power packs and aircraft ground support systems to Turnkey industrial installations. It also manufactures an extensive range of hydraulic gear pumps in cast iron and aluminium that find application in agricultural equipment, construction equipment, material handling equipment, mining and drilling equipment and in marine applications.
Swindon (UK)	Its facility in UK has over 50 years of experience in design and manufacturing of gear pumps and supplies products to agricultural, construction and off-highway vehicle manufacturers in UK, Europe and USA. Its products include combined variable and fixed displacement pump packages, temperature controlled fan drive systems and fixed displacement pumps in aluminium and cast iron with a range of additional integrated valve options.

Source: I-Sec research, Company data

Exhibit 50: Hydraulics journey

Source: I-Sec research, Company data

Exhibit 51: Key financials of hydraulics segment

Hydraulics – Segment (INR mn)	FY16	FY17	FY18	FY19	FY20	FY21	FY22	FY23	9MFY24
Revenue	2,614	2,769	3,111	3,631	2,949	2,977	4,236	4,607	3,259
EBITDA	326	398	370	415	193	311	731	855	307
EBITDA Margin (%)	**12.5%**	**14.4%**	**11.9%**	**11.4%**	**6.5%**	**10.4%**	**17.3%**	**18.6%**	**9.4%**

Source: I-Sec research, Company data

Exhibit 52: Performance of hydraulics segment over the years

Previous years	Key comments on the performance
9MFY24	Hydraulics segment showed a decline of 5.0% YoY in 9MFY24 due to unfavourable monsoon conditions in India and UK, deliveries started ramping up after a temporary pause in production to implement a design modification to one of its major products that has impacted revenue and margins in both UK and India. However, revenue is likely to bounce back in coming quarters.
FY23	In FY23, hydraulics segment recorded top-line growth of 9% YoY along with improvement in profitability. Margin enhancement was driven by development of new products, addition of new applications, resulting in better product mix. Continuous process improvement measures further helped in improving efficiencies and margins.
FY22	In FY22, hydraulics segment recorded a robust top-line growth of >42% YoY along with significant improvement in profitability.
FY21	In FY21, hydraulics segment was severely impacted in the first half of the year due to global slowdown and pandemic-related lockdowns. However, in H2FY21, demand increased significantly, resulting in moderate growth in revenue and improvement in profitability. The margin enhancement was driven by strong demand across our product portfolio and better product mix.
FY20	In FY20, hydraulics segment was severely impacted by the global slowdown and the pandemic led lockdowns. Q4FY20 witnessed reduced aftermarket sales that impacted growth. The company is focused on shifting from outsourcing to in-house production for reducing dependency on third-party vendors, increasing utilisation levels, minimising wastages, and enhancing cost controls.
FY19	In FY19, hydraulics segment growth was led by improved agri market in the US, resulting in an increase in ractor production and demand from major OEMs. The year also saw an increase in demand for after sales market, in particular for gold value pumps in European market. Influx of low-cost products from China and other countries over the last couple of years resulted in a decline in demand for these pumps. However, due to poor performance of these pumps, most of the demand is returning to better quality and reliable products. The business has improved and the outlook looks even better.

Source: I-Sec research, Company Data

Hydraulics: Industry size and outlook

Industry size: Global tractors market size is estimated at USD 83.56bn in CY24, and is likely to reach USD 110.76bn by CY29, growing at a CAGR of 5.80% during the forecast period (CY24-CY29). The Indian agricultural tractor market size is estimated at USD 2.37bn in CY24, and is likely to reach USD 3.13bn by CY29, growing at a CAGR of 5.80% during the forecast period (CY24-CY29). Governments in emerging markets are encouraging farmers in their countries and providing farm equipment at subsidised and low interest rates. Asia-Pacific region is likely to witness significant growth in the next five years as emerging key economies like India, China, and Japan are encouraging farmers in their countries by offering subsidised farm equipment and low credit rates to encourage tractor adoption. (Link)

The Indian construction equipment (CE) industry recorded an excellent 26% YoY growth with sales crossing the 1,00,000 units' in FY23. The significant growth in FY23 was driven by all four sub-segments of CE industry: i) Road construction equipment, ii) material handling equipment, iii) earthmoving equipment and iv) tele-handler.

Outlook: The tractor industry is likely to record low single digit growth in FY24 due to forecast of subdued monsoons. The demand from the market in Europe and USA continues to remain stable. However, higher commodity prices, inflation, power surcharge and removal of subsidy on power by the UK government may put pressures in DTL's UK business. In case of construction equipment industry, a strong recovery is anticipated on the back of export potential and the government's continued thrust on infrastructure development through National Infrastructure Pipeline, Gati Shakti Masterplan, National Monetisation Plan, constitution of National Bank for Financing Infrastructure and Development. DTL continues to focus on increasing market share and improving efficiencies. Furthermore, the company is likely to focus on developing new products to increase its wallet share.

Additionally, given the growth potential in construction equipment sector, **DTL is investing in development of high pressure, heavy-duty cast iron pumps to cater to construction equipment sector.** These products are in various stages of development and testing which will cater to global OEMs. Some of these products will undergo production phase in coming years, with supplies to global OEMs and aftermarket. The key customers of the company include M&M, John Deere, Escorts, MACDON, Mexico Alexander Dennis (UK), TEREX, CNH, Wirtgen, Atlas, Cocpco Itl, JCB, TAFE, VST, HAL, SDF, Cummins, Ace, MTPF and DLW.

Metallurgy segment

In Metallurgy, DTL manufactures high quality ferrous and non-ferrous automotive components for highway, off-highway and technology-oriented applications for leading global automotive OEMs. The company has modern ferrous, non-ferrous foundries and modern state-of-the-art automotive component manufacturing facilities in India and Germany.

EISENWERK ERLA GmbH, Germany

Eisenwerk Erla GmbH, Germany, a subsidiary of Dynamatic Technologies, is a preferred supplier of precision, complex metallurgical products to leading global OEMs. The Eisenwerk Erla site has been in business for over 630 years, having one of the finest ferrous foundries in Europe, capable of manufacturing extremely intricate ferrous castings from difficult-to-cast materials, and strong R&D capabilities with patented technologies specific to the automotive industry. Eisenwerk Erla GmbH is a preferred supplier of precision, complex metallurgical products for automotive engines and turbochargers to leading global automotive OEMs including Audi, BMW, Borg Warner Turbo Emission Systems, Volkswagen and Daimler. Eisenwerk Erla is also implementing its transition plan to build up a further line of business for manufacturing of components for aircraft applications at the EEL site, in addition to the existing production.

DTL plans to expand its operations significantly in Germany and is currently in the process of transformation from an automotive/foundry-focus to aerospace business. Considering the various challenges such as supply-chain crisis at OEMs, current inflation in Europe, steep and unpredictable increase in the cost of gas and electricity being faced by corporations across Europe, Eisenwerk undertook corporate restructuring measures through **'Protective Shield process by self -administration'** under applicable German Laws. We believe the company is entitled to additional revenue from its customers under the government's protective shield policy.

Exhibit 53: Key financials of metallurgy segment

Hydraulics - Segment	FY16	FY17	FY18	FY19	FY20	FY21	FY22	FY23	9MFY24
Revenue	9,605	8,834	6,944	6,683	5,261	4,658	4,650	4,166	3,647
EBITDA	393	294	238	251	212	132	203	172	231
EBITDA Margin (%)	**4.1%**	**3.3%**	**3.4%**	**3.8%**	**4.0%**	**2.8%**	**4.4%**	**4.1%**	**6.3%**

Source: I-Sec research, Company data

Exhibit 54: Performance of metallurgical segment over the years

Previous years	*Key comments on the performance*
9MFY24	Metallurgy segment remained under pressure due to demand shortage, German economy being in recession, resulting in weak business prospects and geopolitical uncertainties. Going forward, the segment's performance will be majorly driven by the availability of raw materials, input commodity prices and cost of financing to end customers.
FY23	In FY23, metallurgy segment was impacted strongly by unprecedented inflation and instability in Europe caused by Russia - Ukraine conflict and other supply-chain challenges.
FY22	In FY22, metallurgy segment saw a decline in production after the peak of covid-19 pandemic, followed by supply-chain interruptions.
FY21	In FY21, metallurgy segment saw a reduction in top-line profitability due to covid-19 pandemic. The auto industry showed resilience during the second half of the year which supported moderate top line growth of the segment.
FY20	In FY20, metallurgy segment saw a reduction in top-line growth due to slowdown of global and domestic auto industry.
FY19	In FY19, metallurgy segment took a conscious step to enhance margins by rationalising product mix. New order execution in India resulted in top-line growth across business division. This is a result of volume growth from investments made by the company in new product development.

Source: I-Sec research, Company data

Industry Section

Aerospace & defence

Aerospace industry

The global commercial aircraft market is dominated by Boeing Company and Airbus SE – together have more than 90% of global commercial aircraft market. A few other players such as Pratt & Whitney, ATR, Bombardier and Embraer also manufacture aircraft, but have a much smaller share. Newer players like China's COMAC (Commercial Aircraft Corporation of China) and Russia's Irkut Corporation have also emerged, but are yet to make a mark (source: Industry reports). Airbus and Boeing have an order backlog of >12,000 units. Nearly 87% of these backlog orders were for narrow body aircraft like Airbus A220, A320 and Boeing 737. ***Both global majors (Airbus and Boeing) estimate more than 40,000 aircraft requirement over the next 20 years.***

As per Global Market Forecast (GMF-23) of Airbus: "*Passenger traffic growth is expected to be ~3.6% (2019-2042 CAGR) and freight traffic is expected to grow ~3.2% (2019-2042 CAGR). Further, fleet in service beginning of 2020 is ~22,880 aircraft and is expected to increase to ~46,560 aircraft by 2042, and* ***new deliveries are expected to be 40,850 aircraft over the next 20 years***".

As per Global Market Forecast (GMF-23) of Boeing: "*Fleet in service beginning of 2022 is ~24,500 aircraft, which is expected to increase to ~48,600 aircraft by 2042, and* ***new deliveries are expected to be 42,595 aircraft over 2023-2042***".

Dynamatic Technologies: DTL manufactures precision flight critical and complex airframe structures and aerospace components. It is a tier-I supplier to global aerospace OEMs and primes such as Airbus, Boeing, BEL, Bell Helicopters, Dassault Aviation, Hindustan Aeronautics Limited and Spirit Aero systems. DTL has been supplying flight critical FTBs assemblies to Airbus for the past 17 years, first as tier II and then as tier I. Today, it produces FTBs assemblies on a global single source basis directly for A330 aircraft and indirectly for A320 family aircraft.

For Airbus: DTL is the world's largest single source supplier of the FTBs for Airbus. It currently supplies (single source) FTBs for A-320 family (A318, A319, A320 & A321) and A330 family. These FTBs are class-1 Flight Critical Assemblies that are connected to wings. DTL has delivered more than 7,000 aircraft sets of FTBs till date and has also successfully completed the A320 re-design of the FTB with a monolithic structure working closely with Spirit Aero Systems. The company delivers close to 800 aircraft ship sets annually, making it the largest producer of FTBs globally. Further in FY23 (June'22), DTL won the contract to manufacture the Escape Hatch Door (EHD) for Airbus A220 aircraft. The contract was placed by the recently established Stelia Aeronautique Canada Inc., a subsidiary of Airbus Atlantic SAS. This contract marks a significant milestone in the workshare of the A-220 supply chain in India.

In Feb'24, the company announced a new contract with Airbus to manufacture and supply the main passenger doors, service doors, cargo doors and over-wing emergency exit doors for the A-220 aircraft. The management mentioned: "This export award is amongst the largest ever placed on an Indian manufacturer by any global aviation OEM, and is a strong testament to Make-In-India. Company is delighted to have been chosen by Airbus to produce the doors for the A220, which is the most advanced and efficient aircraft in its class".

For Boeing: DTL is the sole global supplier of power and mission cabinets for Boeing's P8 Poseidon aircraft. The company manufacturers the Aft Pylon Assembly and Cargo

Ramp Assembly for CH-47 Chinook helicopters. This is the Boeing's largest export programme out of India. DTL has been awarded a contract for manufacturing assemblies for Boeing's newest tactical fighter, F-15EX Eagle II. This is the first time when aero structures for the latest and most advanced F-15EX Eagle II will be made in India. DTL has recently delivered Boeing MQ25 whiffletree assemblies. These whiffletree assemblies are for static and fatigue testing of the control surfaces of MQ25 Unmanned Fueler Aircraft Program.

For Bell: Bell 407 is one of the world's largest selling helicopters. DTL has been contracted as a single source supplier of major airframe assemblies for Bell 407 Helicopter for the 'life of programme'.

Exhibit 55: Bell Textron Inc. Bell 407 deliveries

No. of helicopters	CY20	CY21	CY22	CY23
Bell - 407 deliveries	54	56	49	53

Source: I-Sec research, Textron

Let's get deeper into Indian aviation market

India is the largest growing commercial and defence aircraft market in the world. Civil aviation is one of the fastest-growing sectors in India. India is projected to have more than 500mn domestic and international air travellers by CY30 and has the potential to become the world's leading aviation market by CY47. The number of airports in India had increased to 147 in CY22 from 74 in CY14 and may reach 220 by CY25 (source: Industry reports). With rising passenger traffic and increasing military and defence expenditures, demand for aircraft and its supply chain is increasing in India.

In CY16, the Ministry of Civil Aviation (MCA) released the **National Civil Aviation Policy (NCAP)** which included objectives such as: i) Promoting the rapid growth of the sector, ii) improving the ease of doing business, iii) advancing regional connectivity, and iv) opening opportunities for additional players in the market to meet India's largely untapped and growing demand. To address the supply-demand gap in India, a key component of the NCAP is **"Ude Desh ka Aam Naagrik," (UDAN)** an initiative that includes a Regional Connectivity Scheme (RCS) to make air travel more affordable and add routes and flights for unserved and underserved airports. As of Aug 28, '23, 481 out of 1,000 routes had been operationalised under the RCS scheme, with the goal of 50 additional airports, heliports and water aerodromes.

Airbus on India in Wings India (March'22): According to Airbus' India Market Forecast (Mar'22), India will require 2,210 new aircraft over the next 20 years. That fleet could comprise 1,770 new small and 440 medium and large aircraft. The annual passengers' growth is likely at 6.2% (vs global average 3.9%). Airbus annually sources more than USD 650mn from India. (Link)

Some key policies introduced by the Indian government in aviation sub-sectors

Maintenance, Repair, and Overhaul (MRO): The Indian government has revised its MRO policy with the goal of making India a global leader in MRO sector. *Approximately 90% of India's MRO activity occurs outside India, predominantly in Sri Lanka, Singapore, and Malaysia.* Indian MRO sector is at a nascent stage and efforts are underway to make India a regional hub for MRO services, given its advantageous geographic location between Europe and Southeast Asia and its proximity to the Middle East.

As per the annual report of the DTL (FY23), Indian civil aviation MRO market, at present, stands at around USD 900mn and is anticipated to grow to USD 4.33bn by

CY25, increasing at a CAGR of about 14-15%. To accommodate this booming industry, the government plans to invest INR 350bn (USD 4.99bn) over the next four years and further develop airport infrastructure.

Helicopters: To encourage demand and usage of helicopters, the government has recently issued its **"Policy for Promotion of Helicopter Operations,"** which invites opportunities to increase fleet size and usage beyond the traditional short-haul travel, tourism, disaster management, and emergency response sectors. *India has approximately 90 helicopter operators, including non-scheduled operators, private companies, state governments, and public sector utility companies, comprising a combined fleet of 280 turbine helicopters – a small fraction of 14,000 helicopters in service in the United States.* As this segment grows, there are burgeoning opportunities in fleet sales, MRO and helicopter pilot training services and facilities.

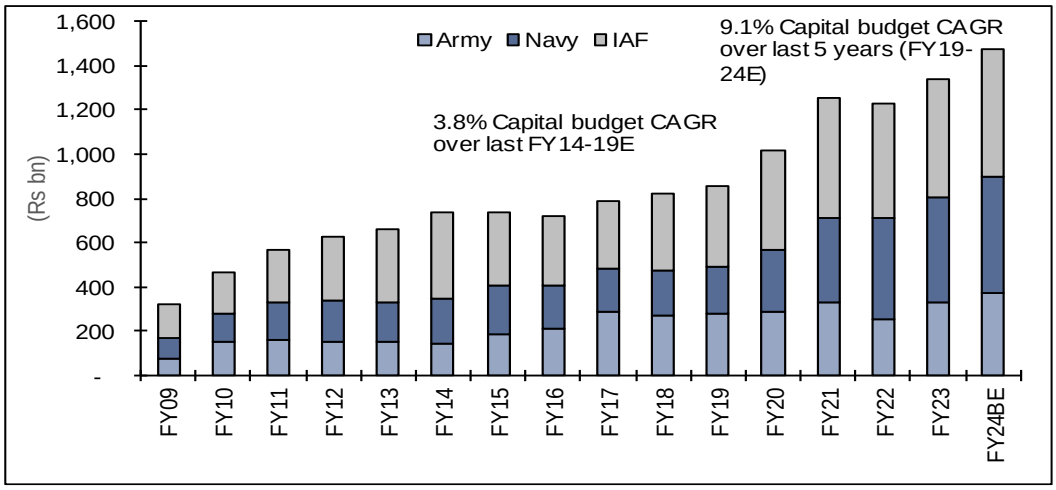
Unmanned Aircraft Systems (UAS): In Feb'22, the Directorate General of Foreign Trade (DGFT) banned the importation of foreign drones. However, an exemption is in place for research and development (R&D), defence and security purposes. The importation of drone components will not require approvals. Imports are also allowed in the form of completely built up, completely knocked down or semi knocked down units for R&D purposes by entities such as the central or state government, government-recognised R&D institutions, and indigenous manufacturers. In Aug'21, the Indian government released its "**Drone Rules 2021,**" with the goal of making India a global hub for drone R&D, testing, manufacturing, and operations. *According to EY, India could have the capacity to manufacture drones worth USD 4.2bn by CY25 and USD 23bn by CY30.*

Indian defence industry

India ranks third in the world in terms of defence expenditure. India's military expenditure, as a share of GDP, has been consistent at ~2.5% over the last 5 years. Indian government's Union Budget of FY25 allocated INR 5,960bn towards the Ministry of Defence (MoD). The MoD budget in India is split across defence services, MoD civil services and pensions. Defence services expenditure is the largest segment accounting for ~72-73% allocation of the annual defence budget in FY25. India has been increasing the allowance for defence services over the years and actual expenditure has been consistently higher than the initial estimate of the budget over the last 5 years.

Increase in defence capital budget – The defence capital budget increased at a CAGR of ~3.8% from FY14-FY19; however, since FY19, it has increased by 9.1% CAGR.

Exhibit 56: Defence budget of India



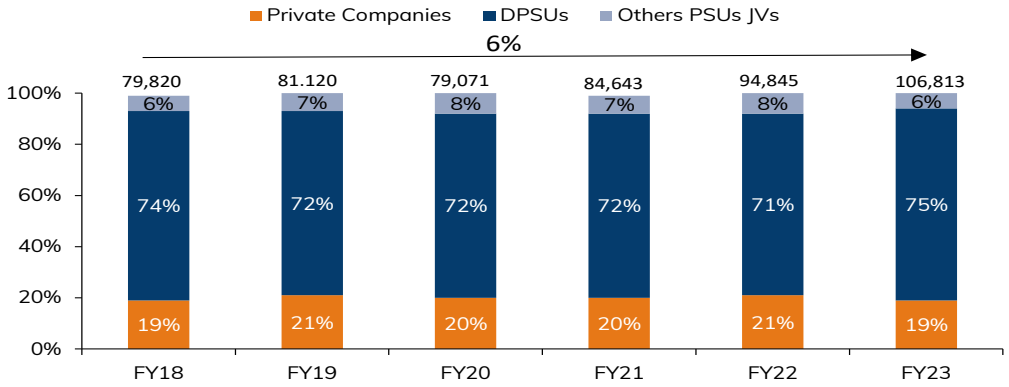
Source: I-Sec research, Ministry of Defence

Trends in defence production in India

Although India has a wide system of defence PSUs, ordnance factories and private players in defence manufacturing space, it is highly dependent on imports for its advanced military equipment. The country has consistently ranked among the top importers of major arms. According to SIPRI, India ranked first in the world in terms of major arms imports during CY18-22 with 11% share in total global imports.

To boost local manufacturing and reduce its dependence on imports, Indian government recognised the defence segment as a core sector for achieving 'Aatmanirbharta' in CY20. The scheme pushed for reforms across verticals and adequate funding to achieve 'self-reliance'. Post the launch of the scheme, defence production has grown at 12% between FY21 and FY23 and defence exports by 37% during the same period.

Exhibit 57: Trends in defence production in India (INR cr) (FY18-23)



Source: I-Sec research, Azad prospectus

The "Aatmanirbharta" (self-reliance) is perhaps the biggest strategic development related to the defence sector, with the goal of achieving domestic manufacturing turnover of USD 25bn. In 2016-2017, the MoD began efforts to institutionalise, streamline, and simplify procurement procedures. These procedures were revised in the DAP 2020, an attempt by the MoD to refine procurement procedures with focus on self-reliance. To attract FDI from foreign OEMs, DAP 2020 increased the FDI limit to 74% and encourages foreign manufacturers to establish operations in defence industrial corridors in Uttar Pradesh and Tamil Nadu. DAP 2020 includes five procurement categories: (1) Buy; (2) buy and make; (3) make; (4) leasing; (5) design and development/innovation. These categories include subcategories listing details on indigenous content requirements. Details of some other initiatives are mentioned below:

- **Indigenisation thrust** – The increase in allocation for procurement from domestic industry (indigenisation) has increased to ~75% from less than 50% in FY19.
- **Other initiatives-** Defence Acquisition Procedure (DAP)-2020, Positive Indigenisation Lists (PILs), launch of Innovations for Defence Excellence (iDEX) scheme, launch of an indigenisation portal "SRIJAN" and reforms in Offset policy have given a push to the growth of industries. Further, the ease of DAP 2020, government's focus on increased private participation, focus on defence exports, increased R&D budget etc. have created positive environment.
- **Defence exports-** Indian defence exports have risen by more than 10 times since 2016-17. In 2016-17, defence exports were worth INR 15.2bn, which has gone up to INR 160bn in FY23.

The Indian government's initiative to expand indigenous defence manufacturing demonstrates the country's determination to become more self-reliant in the sector. However, demand for innovative, next-generation technologies in a wide range of subsectors will remain. It is worth noting that certain types of defence equipment not manufactured in India are exempted from basic customs duties. The Indian government's approach to the development of indigenous manufacturing is also outlined in the Defence Production and Export Promotion Policy 2020.

In Focus: Boeing and Airbus

(combined market share of >90% in commercial aviation)

The global commercial aircraft market is dominated by Boeing Company and Airbus SE – together have more than 90% of global commercial aircraft market (source: Industry reports). Airbus and Boeing have an order backlog of >12,000 units. Nearly 87% of these backlog orders were for narrow body aircraft like Airbus A220, A320 and Boeing 737. ***Both the global majors (Airbus and Boeing) estimate more than 40,000 aircraft requirement over the next 20 years.***

Boeing: An Indian perspective

India operates a large range of Boeing platforms, including C-17s, AH-64 Apaches, CH-47 Chinooks, P-8Is, VVIP aircraft (737 airframe) and Head of State aircraft (777 airframe), making India one of the largest defence markets for Boeing. In civil aviation, India's airlines operate 737-BCFs, 737 MAX, 787 Dreamliner and 777X airplanes etc. Boeing annually procures >USD 1bn from 300+ suppliers from India and its USD 200mn investment in Bengaluru is the largest such facility outside the US.

Exhibit 58: Boeing's operational fleets in India

Commercial	Defence
• 22 nos. of 777s and 27nos. of 787s with Air India • 26 nos. of 737NGs with Air India Express • 19 nos. of 737 MAXs with Akasa Air • 1 nos. of 777 with IndiGo • 18 nos. of 737 MAXs and 29 nos. of 737NGs with SpiceJet • 4 nos. of 787s and 2 nos. of 737NGs with Vistara • 6 nos. of 757s and 2 nos. of 737BCFs with Blue Dart • 2 nos. of 737BCFs with Quikjet	• 12 nos. of P-8Is with Indian Navy • 11 nos. of C-17 Globemaster IIIs • 15 nos. of CH-47 Chinooks with the IAF • 22 nos. of AH-64 Apaches with the IAF • 2 nos. of 777-300ER Head of State aircraft • 3 nos. of 737 Boeing Business Jets with IAF for VVIP flight

Source: I-Sec research; American chamber of commerce in India (Sept-23 report)

Boeing in civil aviation

In civil aviation, Boeing customers include Air India, Air India Express, Akasa Air, SpiceJet, Vistara and cargo operator Blue Dart, and Quikjet.

Some of the recent orders placed by Indian players: Air India will purchase 190 nos. of 737 MAX, 20 nos. of 787 Dreamliner and 10 nos. of 777X airplanes, with options for 50 additional 737 MAXs and 20 nos. of 787-9. Akasa Air has placed an order of 72 nos. of 737 MAX airplanes to build its fleet. SpiceJet has an order of several airplanes, which includes 155 new 737 MAX 8, 9 and 10 airplanes, as well as purchase rights for 50 additional airplanes. Vistara has an order of six, 787-9 Dreamliners with purchase rights for four more. Blue Dart, India's largest express cargo operator, uses the 757 Freighter. SpiceXpress, SpiceJet's cargo division, operates the 737-BCFs, first one to operate in South Asia.

Boeing's global outlook

As per Global Market Forecast (GMF-23) of Boeing: *"Fleet in service beginning of 2022 is ~24,500 aircraft and which is expected to increase to ~48,600 aircraft by 2042, and new deliveries are expected to be 42,595 aircraft over 2023-2042".*

Exhibit 59: Global Market Forecast by Boeing (CY23-42)

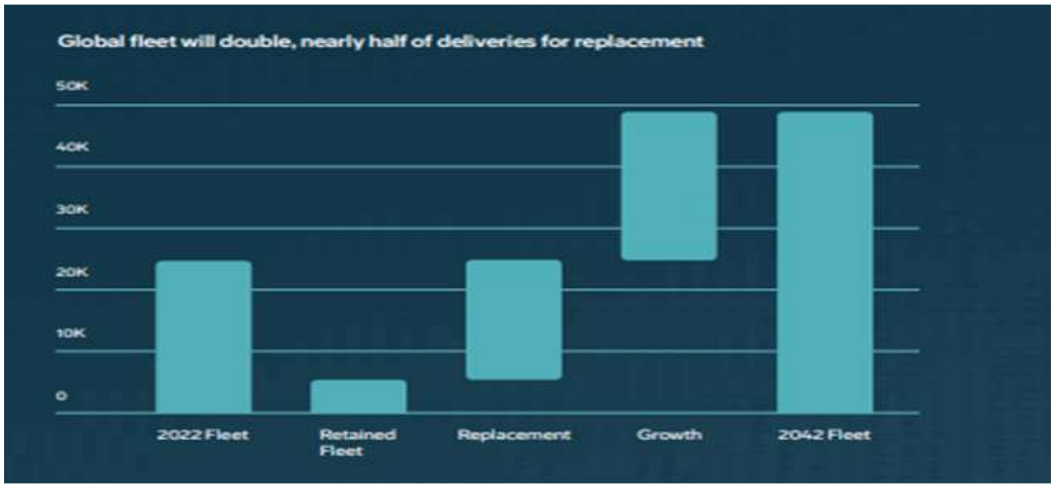
DELIVERIES (2023-2042)	Africa	China	Eurasia	Latin America	Middle East	North America	Northeast Asia	Oceania	South Asia	Southeast Asia	World
Regional Jet	20	350	145	<5	35	1,210	<5	5	<5	45	1,810
Single Aisle	730	6,470	7,870	1,930	1,570	6,810	790	540	2,320	3,390	32,420
Widebody	250	1,550	1,480	170	1,350	810	520	160	380	770	7,440
Freighter	25	190	150	5	70	420	40	<5	5	20	925
Total	**1,025**	**8,560**	**9,645**	**2,105**	**3,025**	**9,250**	**1,350**	**705**	**2,705**	**4,225**	**42,595**

Source: Boeing, I-Sec research

Exhibit 60: Boeing's commercial market outlook (2023-2042) from GMF-23

Source:Boeing, I-Sec research

Exhibit 61: Global fleet to double by 2042, nearly half of the deliveries are for replacement



Source:Boeing, I-Sec research

Boeing in defence

India operates a large range of Boeing platforms, including 11 nos. of C-17s, 22 nos. of AH-64 Apaches (with six more on order), 15 nos. of CH-47 Chinooks, 12 nos. of P-8Is, 3 nos. of VVIP aircraft (737 airframe) and two Head of State aircraft (777 airframe), making India one of the largest defence markets for Boeing. Boeing annually procures >USD 1bn from 300+ suppliers from India and its USD 200mn investment in Bengaluru is the largest such facility outside the US.

Exhibit 62: Key domestic suppliers of Boeing

Supplier	Key components
Dynamatic Technologies	DTL has been manufacturing the ramp and complex Aft Pylon for Chinook heavy-lift helicopters, and P8 cabinets. DTL has recently won the contract to supply the F-15EX Eagle II programme. This is a first where aero structures for the latest and most advanced F-15EX Eagle II will be made in India.
Rossell Techsys	It manufactures wire harness and electrical panel for AH-64 Apache, and the harness for several Boeing Defence, Space & Security (BDS) platforms including V-22 Osprey, CH-47 Chinook, F-15 and F/A-18 Super Hornet. Rossell Techsys entered into an agreement with Boeing to manufacture and supply wire harnesses for the T-7A Red Hawk platform. Rossell will be manufacturing Electrical Wiring and Interconnect System (EWIS) parts and the deliveries will continue through FY32, covering a total of 84 unique parts. All parts will be manufactured at Rossell's Center of Excellence (COE) set-up exclusively for Boeing.
SASMOS HET Technologies	It manufactures electrical panel assemblies for F/A-18 Super Hornet and F-15 Strike Eagle.
HAL	HAL manufactures F/A-18 gun bay doors.
BEL	BEL manufactures IFF (Identify Friend/Foe) and speech secrecy system for P-8I.
Jaivel Aerospace	Jaivel will manufacture and supply aircraft protection system products for Boeing T-7A Red Hawk aircraft. Working with Boeing teams in India and the US, Jaivel Aerospace has developed entirely new capabilities for this product range, for the first time in India. These products will be manufactured at the company's manufacturing facility at Sanand Industrial Estate in Ahmedabad.

Source: I-Sec research; American chamber of commerce in India (Sept-23 report)

Boeing JV with Tata: Tata Boeing Aerospace Limited (TBAL), Boeing's joint venture (JV) with Tata was established in Jun'16 as a state-of-the-art manufacturing facility in Hyderabad. It manufactures aero-structures for Boeing's AH-64 Apache helicopter, including fuselages, secondary structures and vertical spar boxes for customers worldwide. TBAL has manufactured and delivered more than 200 Apache fuselage units till date. The JV has the capacity to produce up to 8 fuselages every month. The JV delivered its first Indian Army configuration Apache fuselage on Jan 19, 2023 and has shipped over 1,500+ secondary structures and vertical spar box for the same platform. On the commercial side, TBAL has shipped more than 90 uplock boxes for 777/777X programme till date. A new production line to manufacture complex vertical fin structures for 737 family of airplanes has been added and the first 737 vertical fin structure has been delivered recently.

Boeing and Dynamatic Technology

The company is the sole global supplier of power and mission cabinets for Boeing's P8 Poseidon aircraft. The company manufacturers the Aft Pylon Assembly and Cargo Ramp Assembly for CH-47 Chinook helicopters. This is the Boeing's largest export programme out of India. DTL has been awarded a contract for manufacturing assemblies for Boeing's newest tactical fighter, F-15EX Eagle II. This is the first time when aero structures for the latest and most advanced F-15EX Eagle II will be made in India. DTL has recently delivered Boeing MQ25 whiffletree assemblies. These whiffletree assemblies are for static and fatigue testing of control surfaces of the MQ25 Unmanned Fueler Aircraft Program.

Exhibit 63: Key platforms delivered/ordered by/for Boeing's defence platforms

(units)	CY15	CY16	CY17	CY18	CY19	CY20	CY21	CY22
P8 Poseidon								
Orders	86	92	128	112	94	97	97	85
Delivery	14	18	19	16	18	15	16	12
CH-47 Chinook								
Delivery	57	50	44	30	35	30	30	28
T-7A Red Hawk								
Orders				351	351	351	351	350
Delivery								1
F-15 Models								
Delivery	12	15	16	10	11	4	16	12

Source: I-Sec research, Boeing

Exhibit 64: Key Boeing platforms and DTL's contribution

Platform	Outlook
Boeing MQ25	In 2021, Boeing and the US Navy conducted three historic un-crewed aerial refuelling missions with MQ-25 T1 test asset, transferring fuel for the first time to an F/A-18 Super Hornet, E-2D Hawkeye and F-35C Lightning II. The F/A-18 flight marked the first time in history an un-crewed aircraft refuelled another aircraft. Following this, Boeing announced a new USD 200mn, 300,000-sq-ft MQ-25 production facility, scheduled for completion in CY24 at Mid America St. Louis Airport in Illinois. In 2020, the US Navy exercised an option for three additional MQ-25s, the service's first operational carrier-based un-crewed aircraft. Boeing is manufacturing seven aircraft and two test articles under the initial contract awarded in 2018, and ***the US Navy's stated requirement is for >70 nos. of MQ-25s***. ***DTL contribution:*** *DTL has delivered Boeing MQ25 whiffletree assemblies (these whiffletree assemblies are for static and fatigue testing of control surfaces of the MQ25 Unmanned Fueler Aircraft Program).*
Boeing F-15EX	Boeing defence platform includes the digitally transformed F-15EX Eagle II; the Block III F/A-18 Super Hornet and F/A-18 Super Hornets that have gone through the Service Life Modification (SLM) line; the EA-18G Growler; and the T-7A advanced pilot training system. Two F-15EX Eagle II were delivered to US Air Force in 2021, ahead of the schedule and performed full-scale operational testing six months later, achieving impressive results with their advanced survivability, weapons payload and networking capabilities. ***DTL contribution:*** *DTL has designed and delivered Boeing F-15EX assemblies, which involved developing 3D models, tooling for detailed parts and assembly, and manufacturing detailed parts and assembly in record time by adapting APQP methodology*
T-7A Red Hawk	After US Air Force awarded Boeing the Advanced Pilot Training System contract in 2018, the T-X aircraft was officially named the T-7A Red Hawk in 2019. The contract is for 351 jets, 46 high-resolution simulators and associated ground equipment. To date, more than 450 successful engineering and manufacturing development flight tests have been accomplished as the advanced trainer stages for initial production. The first EMD T-7A Red Hawk was officially rolled out for US Air Force on Apr 28, '22. ***DTL contribution:*** *DTL has been awarded a contract for the delivery of tools for static and fatigue testing of control surfaces of Boeing- SAAB T-7A Red Hawk Program.*
CH-47 Chinook Helicopters	In 2022, Boeing achieved two key international vertical lift down-select awards. In Jun'23, Germany selected the Chinook (60 aircraft) as its future heavy-lift aircraft, and in Sep'23, Polish government chose the Apache (96 aircraft) as its upcoming attack helicopter. For Chinook, Boeing received awards to produce six more MH-47G aircraft and two more CH-47F Block II. In Dec'23, Boeing also received a contract to produce two more Block I Chinooks for the Army and 12 for the Egyptian Air Force. ***DTL contribution:*** *The company manufacturers the Aft Pylon Assembly and Cargo Ramp Assembly. This is Boeing Defence system's largest export programme out of India.*
P8 Poseidon Maritime Reconnaissance Aircraft	In Feb'22, Boeing delivered the 12th P-8I, which was the fourth aircraft to be delivered under an option contract for four additional aircraft that the Indian MoD placed in 2016. The P-8 program has delivered nine of nine P-8A Poseidon aircraft to the United Kingdom and five of five P-8A Poseidon aircraft to Norway. In Dec'22, Boeing delivered the first P-8A to New Zealand. This delivery also marked the 155th P-8 aircraft delivered to global customers. First deliveries to Korea and Germany are scheduled to take place in CY23 and CY24, respectively. **DTL contribution:** *The company is Boeing's sole global supplier of power and mission cabinets for Boeing's P8 Poseidon Maritime Reconnaissance Aircraft.*

Source: I-Sec research, Boeing annual report

Airbus: An Indian perspective

Airbus in Indian civil aviation

India operates a large fleet of Airbus aircraft. Airbus' relationship with India started some half a century ago with the delivery of the first Airbus A300 twin-aisle aircraft to the erstwhile Indian Airlines, now Air India. It has a proud and prominent presence in the Indian skies, accounting for a vast majority of the in-service fleet and with about 500 aircraft still to be delivered.

Airbus on India in Wings India (March'22): According to Airbus' latest India Market Forecast, India will require 2,210 new aircraft over the next 20 years. That fleet could comprise 1,770 new small and 440 medium and large aircraft. The annual passengers' growth is expected at 6.2% (vs global average 3.9%). Airbus annually sources more than USD 650mn from India. (Link)

Airbus recently announced a landmark deal with Air India that includes the acquisition of 40 next generation A350 aircraft and 210, A-320 family aircraft. The A-350 is set to become the unmatched, new flagship for Indian aviation and will bring India closer to the world.

IndiGo, India's largest airline by market share, has placed a firm order for 500 nos. of A-320 family aircraft, setting the record for the biggest single purchase agreement in the history of commercial aviation. The latest agreement takes the total number of Airbus aircraft on order by IndiGo to 1,330, establishing its position as the world's biggest A-320 family customer.

Exhibit 65: Airbus group supplier in India

Sectors	Airbus group suppliers India
PSU	HAL, ISRO, BEL
Private sector (Manufacturing)	Aequs, Alpha Design, Ankit Fasteners, CIM Tools, Deutsch Connectors, Dynamatic Technologies, Eaton, EIS Electronics, Garcher, Pranita Engineering, Honeywell, Lakshmi Precision Screws, Machaero, Mahindra Aerospace, Maini Precision, Moog, Rangsons, Recaero, San Auto, Sansera, Sefee, Tata Advanced Materials, Tata Advanced Systems, TAL Manufacturing Solutions, TE Connectivity, Thales, Titeflex India, Triveni Hitech, UTC Aerospace, Wipro - CESA, XOL Technologies
Private sector (Services)	Accenture, Alten India, Altran India, Assystem, Cades, Capgeminin Cyent, Geometric Technologies, HCL Technologies, HP, Infosys, L&T Infotech, P3 Voith, Quest, Sopm, Steria, Tata Consultancy Services, Tata Technoogies, Tech Mahindra, Wipro

Source: I-Sec research, Airbus

Global outlook: As per the GMF-23: "Passenger traffic growth is expected to be ~3.6% (2019-2042 CAGR) and freight traffic is expected to growth ~3.2% (2019-2042 CAGR). Further, fleet in service beginning of 2020 is ~22880 aircraft and which is expected to increase to ~46560 aircraft by 2042, and new deliveries are expected to be 40,850 aircraft over the next 20 years".

Exhibit 66: Global demand for passenger and freighter aircraft over CY23-CY42 (40,850 aircraft)

	Single Aisle	Wide body
Expected demand	32,630	8,220
	80% share of total new deliveries	20% share of total new deliveries

Source: I-Sec research, Airbus

Exhibit 67: Global demand for freighters (2,510 freighters)

	Single Aisle	Freighter	Wide body
Expected demand	1020	890	600

Source: I-Sec research; Airbus

Exhibit 68: Regional demand growth forecast

Passenger + Freighter aircraft		
Region	Start Fleet 2020	Region
Africa	670	Africa
Asia-Pacific (excl. PRC)	3,960	Asia-Pacific (excl. PRC)
PRC	3,810	PRC
Europe/CIS	6,010	Europe/CIS
Latin America	1,440	Latin America
Middle East	1,280	Middle East
North America	5,710	North America
World	**22,880**	**World**

Source: I-Sec research, Airbus

Exhibit 69: Demand for new passenger and freighter aircraft (Airbus GMF-23)

Source: I-Sec research, Airbus

Airbus and Dynamatic Technologies

Single source supplier of Flap-Track-Beam (FTB) for Airbus A-320 family and A-330 family aircraft

DTL is the world's largest single source supplier of the FTBs for Airbus. It currently, supplies (single source) FTBs for A-320 family (A318, A319, A320 & A321) and A330 family. These FTBs are class-1 Flight Critical Assemblies that are connected to wings. DTL has delivered more than 7,000 aircraft sets of FTBs till date and has also successfully completed the A320 re-design of the FTB with a monolithic structure working closely with Spirit Aero Systems. **The company delivers close to 800 aircraft ship sets annually**, making it the largest producer of FTBs globally.

Airbus has delivered 735 commercial aircraft globally (up 11% YoY) in CY23 (aircraft type comprised 68 nos. of A220 family (53 nos. in CY22), 571 nos. of A320 family (516 nos. in CY22) (DTL's FTBs), 32 nos. of A330 family (DTL's FTBs) (32 nos. in CY22) and 64 nos. of A350 family (60 nos. in CY22)) and the commercial aircraft business registered 2,319 gross new orders (2,094 net) in CY23. The CY23-end order backlog stands at 8,598 aircraft, majority of which is for A320 family.

Exhibit 70: Annual order summary of Airbus aircraft of past 8 years

New Orders (net of cancellation)	CY16	CY17	CY18	CY19	CY20	CY21	CY22	CY23
A220	0	0	135	63	30	38	105	141
A320Family	607	1,054	541	654	263	437	770	1,675
A330	83	21	27	89	-14	30	-65	-3
A350	41	36	40	32	-11	2	10	281
Net orders inflow	731	1,111	743	838	268	507	820	2,094

Source: I-Sec research, Airbus

Exhibit 71: Historical annual orders and delivery

No. of aircrafts	CY16	CY17	CY18	CY19	CY20	CY21	CY22	CY23
New orders	731	1111	743	838	268	507	820	2,094
Delivery	688	718	800	863	566	611	661	735
New order to delivery (times)	**1.1**	**1.5**	**0.9**	**1.0**	**0.5**	**0.8**	**1.2**	**2.8**
Order Backlog	7,171	7,564	7,507	7,482	7,184	7,080	7,239	8,598
Delivery	688	718	800	863	566	611	661	735
New order to delivery (times)	**10.4**	**10.5**	**9.4**	**8.7**	**12.7**	**11.6**	**11.0**	**11.7**

Source: I-Sec research, Airbus

Exhibit 72: Orderbook and backlog of A-320 aircraft of Airbus

A 320 families	CY16	CY17	CY18	CY19	CY20	CY21	CY22	CY23
Net order	607	1,054	541	654	263	437	770	1,675
Delivery	545	558	626	642	446	483	516	571
New order to delivery (times)	**1.1**	**1.9**	**0.9**	**1.0**	**0.6**	**0.9**	**1.5**	**2.9**
Order Back log	5,643	6,139	6,054	6,066	5,883	5,837	6,091	7,195
Order Book to bill (times)	**10.4**	**11.0**	**9.7**	**9.4**	**13.2**	**12.1**	**11.8**	**12.6**

Source: I-Sec research, Airbus

Exhibit 73: Order backlog of Airbus (Dec'23 end)

As on Dec'23end	No. of aircrafts	% of total aircraft
Order Book	8,598	100%
A- 320	7,195	84%
A- 220	602	7%
A- 350	621	7%
A- 330	180	2%

Source: I-Sec research, Airbus

As mentioned in the above tables, DTL supplies FTBs to A-320 family, which comprises ~84% of total order backlog of Airbus. New order inflow has been highest in CY23 with net order inflow of ~1675 A-320 family aircraft which translates into new order to delivery ratio of 2.9x (highest) and orderbook to bill of 12.6 (highest) which provides sufficient revenue visibility over the next 10-12 years, as Airbus has more than 7000 aircraft under its order backlog of A-320 family.

Going forward, we believe, DTL is in an advantageous position, with surge in the orderbook of A320 family, for which it is the single source supplier of FTBs. Also, as per GMF-23, Airbus mentioned new deliveries are likely at 40,850 aircraft over the next 20 years, which denotes positive outlook for DTL.

Encashing new opportunities; DTL to supply Airbus A-220 doors (opportunity size is likely to be ~INR 40bn)

In Feb'24, the company had announced a new contract with Airbus to manufacture and supply the main passenger doors, service doors, cargo doors and over-wing emergency exit doors for the A-220 aircrafts. The management mentioned: "*This export award is amongst the largest ever placed on an Indian manufacturer by any global aviation OEM, and is a strong testament to Make-In-India. Company is delighted to have been chosen by Airbus to produce the doors for the A220, which is the most advanced and efficient aircraft in its class*".

Manufacturing the Escape Hatch Door (EHD) for Airbus A220 aircraft. In FY23 (Jun'22), DTL won the contract to manufacture the EHD for Airbus A220 aircraft. The contract was placed by the Stelia Aeronautique Canada Inc., a subsidiary of Airbus Atlantic SAS. This contract marks a significant milestone in the workshare of A-220 supply chain in India and extends company's capabilities for manufacturing critical aero structure for Airbus. Further, DTL has modified Airbus A-321 series Beam 2 Flap Track to the current design of A-320 FTB.

Exhibit 74: Orderbook and backlog of A-220 aircraft of Airbus

A-220 family	CY18	CY19	CY20	CY21	CY22	CY23
Net order	135	63	30	38	105	141
Delivery	20	48	38	50	53	68
New order to delivery (times)	**6.8**	**1.3**	**0.8**	**0.8**	**2.0**	**2.1**
Order Back log	482	497	489	477	529	602
Book to bill (times)	**24.1**	**10.4**	**12.9**	**9.5**	**10.0**	**8.9**

Source: I-Sec research, Airbus

Hindustan Aeronautics Limited (HAL) and Dynamatic Technologies

The Indian Air Force (IAF) has been undergoing a modernisation programme to replace and upgrade outdated equipment since the late CY90s to meet modern standards. For that reason, it has started procuring and developing aircraft, weapons, associated technologies, and infrastructures. Some of these programmes date back to the late CY80s. The primary focus of current modernisation and upgrades is to replace aircraft purchased from the Soviet Union that currently form the backbone of the IAF. The fleet size of the IAF has decreased to 33 squadrons during this period because of the retirement of older aircraft. To deal with the depletion of force levels, the IAF has started to modernise its fleet. This includes both the upgrade of existing aircraft, equipment and infrastructure as well as induction of new aircraft and equipment, both indigenous and imported. As new aircraft enter service and numbers recover, the IAF plans to have a fleet of 42 squadrons, along with likely 3 additional squadrons from the AMCA programme. Taking the IAF fleet to an optimal 45 squadrons (according to defence standing committee).

Exhibit 75: Details of key platforms used by IAF

Aircraft	Variant	In Service	On Order	Notes
HAL Tejas	Mk1 /Mk1A	33	83+97	Additional 97 planned (AoN granted)
	Mk2			Under Development
Sukhoi	Su-30 MKI	260	12	Upgrades have begun under Super Sukhoi program
Dassault Rafale	EH/DH	36		Expected additions under MRFA program
SEPECAT Jaguar	IM/IS	160		Phased out by CY35
Mirage	Mirage 2000	75		Phased out by CY30
MiG-29	MiG29 UPG	75		Phased out by CY30
MiG-21	MiG21 UPG	40		Phase-out process is going on

Source: I-Sec research, Industry articles/reports

Sukhoi-30

The Sukhoi Su-30MKI is a multirole combat fighter aircraft jointly developed by the Sukhoi Design Bureau and HAL for the Indian Air Force (IAF). Based on the Su-30 fighter aircraft, Su-30MKI is equipped with thrust vectoring control and canards. Sukhoi built two prototypes of the Su-30MKI between CY95-98.

India signed a MoU with Russia in Oct 2000, to start the licence production of Su-30MKIs at HAL's plant. As of CY17, HAL manufactures more than ~80% of the aircraft. In June CY20, India decided to place an order for 12 more Su-30MKI. The Su-30MKI order is to compensate for losses due to crashes to maintain the sanctioned strength of 272 Su-30MKIs.

The Super Sukhoi is a programme to upgrade IAF's Sukhoi Su30MKI fleet. The upgrade will be carried out by HAL with the support of DRDO and several private companies. The Defence Acquisition Council (DAC) has granted the Acceptance of Necessity (AoN) for INR 600bn upgrade programme.

Exhibit 76: Super Sukhoi Upgradation

Equipment	Current	Upgrade
Engine	AL-31FP	AL-41F1S
Radar	N011M PESA	Uttam AESA
Digital Flight Control Computer		MC486 & DP30MK
Cockpit		2 LCD with Multi-function with VACs
Radar Warning Receiver	RWR-118	Dhruti DR118 (Digital)
Missile Warning system		MAWS
Self-Protection (Jammer)	SAP-518	ELL-8222SB / DARE AESA
Search & Track (IRST)	OLS30	Indigenous (BEL system)
Integrated Communication	INCOM12108	Indigenous SDRs

Source: I-Sec research, Industry articles/reports

The Russia-Ukraine conflict has raised concerns among the Indian armed forces due to their heavy dependency on Russian spares. With ~70% of India's armed hardware sourced from Russia, the ongoing conflict and heavy sanctions pose challenges in obtaining spares for maintenance. Thus, IAF has decided to increase the indigenous content in Su-30 MKI upgrades.

DTL contribution in Su-30 aircraft: In 2004, DTL became a work-share partner with HAL on Sukhoi 30MKI for major control surface assemblies. Over 1/6th of the airframe structure, including critical control surfaces are manufactured at its facility co-located at HAL-Nasik, and is the largest PPP for manufacturing between HAL and Indian private sector.

LCA-Tejas fighter aircraft

The HAL Tejas is an Indian single engine, delta wing, light multirole fighter designed by the Aeronautical Development Agency (ADA) in collaboration with Aircraft Research and Design Centre (ARDC) of HAL. It was developed from Light Combat Aircraft (LCA) programme, which began in CY80s to replace India's ageing MiG-21 fighters but later became a part of the general fleet modernisation programme. In CY03, LCA was officially named 'Tejas'. It is the smallest and the lightest in its class of contemporary supersonic combat aircraft. As of CY22, the indigenous content in Tejas Mark 1 is 59.7% by value and 75.5% by the number of line replaceable units. The indigenous content of Tejas Mk 1A is likely to surpass 70% in the next four years. Production partners of HAL LCA Tejas are as follows:

Exhibit 77: Production partners of HAL LCA Tejas

Parts	Company
Front Fuselage	Dynamatic Technologies, Bengaluru
Centre Fuselage	VEM technologies, Hydrabad
Rear Fuselage	Alpha Tocol, Bengaluru
Wings	L&T, Coimbatore
Tail Fin & Rudder	NAL & Tata Advanced Materials

Source: I-Sec research, Industry articles/reports

Exhibit 78: HAL LCA Tejas timeline

Year	Event
2006	Indian Government places an initial order for 20 LCA Tejas from HAL
2010	Indian Government orders twenty additional LCA Tejas, from HAL
2011	Tejas is inducted with its first operational clearance
2016	First Tejas IAF squadron is formed
2019	Tejas achieves final operational clearance
2020	Second Tejas IAF squadron is formed
2021	Indian Air force orders 83 Tejas LCA Mk1A from HAL
2023	AoN grated for additional 97 Tejas LCA Mk1A

Source: I-Sec research, Industry articles/reports

HAL to deliver first Tejas Mark 1A by Mar'24. The order of 83 aircraft for IAF is likely to complete by CY28. The original two Tejas production lines were located in HAL's Bengaluru facility and have a combined production capacity of 16 aircraft per year. In order to speed up delivery, a third production line in HAL's Nashik factory with a capacity of 8 Tejas aircraft per year was inaugurated in Apr'23, taking the production capacity of Tejas LCA to a total of 24 aircraft per year.

DTL's contribution: In 2015, DTL becomes a supplier for Tejas assembly for HAL and inaugurated front fuselage assembly line facility and in Nov' 20, company received Final Operation Clearance (FOC) configuration for HAL. This is a long-term contract, which includes manufacturing of detailed parts and assemblies along with jigs and fixture requirements. This is the first time a complex fuselage section for a supersonic fighter aircraft has been built by a private sector company.

Hydraulics segment

DTL is one of the world's largest manufacturers of hydraulic gear pumps with over 1.5mn pumps produced among its facilities in India and overseas. The company has leadership position in hydraulic gear pumps market for over 45 years. DTL also manufactures automotive turbochargers. It has the capability to build customised solutions for any application ranging from farm mechanisation - agricultural tractors and harvesters, off-highway vehicles, construction equipment, metal cutting & metal forming, material handling and mining equipment. The company has one of the most expansive ranges of pumps (gear pumps, axial piston pumps in aluminium and cast iron construction) for the most rigorous hydraulic applications and designed bespoke for pressure, flow, efficiency, size, weight and noise requirements. It also designs and builds a wide range of control valves, rockshaft assemblies and integrated hydraulic solutions. As per the annual report, ***DTL has ~80% share of the Indian OEM tractor market and ~38% of the global tractor market.***

Furthermore, with given growth potential in construction equipment sector, ***Dynamatic is investing in the development of high pressure, heavy-duty cast iron pumps to cater to construction equipment sector.*** These products are in various stages of development and testing, which will cater to global OEMs. Some of these products will undergo production phase in coming years, with supplies to global OEMs and aftermarket.

Farm Mechanisation

Global market size: Global tractors market size is estimated at USD 83.56bn in CY24, and is likely to reach USD 110.76bn by CY29, growing at a CAGR of 5.80% during the forecast period (2024-2029) (source: Mordor intelligence). Governments in emerging markets are encouraging farmers in their countries and providing farm equipment at subsidised and low interest rates. Asia-Pacific region is expected to witness significant growth in the next five years as emerging key economies like India, China, and Japan are encouraging farmers in their countries by offering subsidised farm equipment and low credit rates to encourage tractor adoption. (Link)

Indian market size: The Indian agricultural tractor market size is estimated at USD 2.37bn in CY24, and is likely to reach USD 3.13bn by CY29, growing at a CAGR of 5.80% during the forecast period (2024-2029). Government initiatives towards rural development, farm mechanisation, and various factors such as high rural wages and scarcity of farm labour, may increase tractor volume over the long term. In terms of units, India is one of the largest tractor markets globally, selling 600,000 to 700,000 tractors per annum on average between CY18-CY21.

India remains a highly lucrative tractor market because of the decreasing availability of farm labour and the rise of innovative business models, such as custom hiring solutions for tractors. In India, under the mechanisation component of the macro-management scheme of agriculture by the Indian government, there is a subsidy for promoting agricultural mechanisation, including 25% of the cost limited to INR 30,000 for buying tractors of up to 35 PTO HP. Thus, with the rising government support for enhancing farm mechanisation and expansion in crop production, the sale of agricultural tractors is anticipated to rise in upcoming years. (Link)

Tractor production in India in FY23 recovered marginally on YoY basis. The industry witnessed a growth rate of ~7% in FY23, with India accounting for ~45% of global tractor volumes produced during this period. Over the past couple of years, there has been significant progress in agriculture mechanisation in India. This shift can be attributed to various factors, including easy availability of credit, government incentives, increased agricultural productivity, the emergence of contract farming, and rising rural incomes. ***The farm mechanisation in India is roughly around 50~52% compared to Europe and USA where it is more than 85%.***

Industry outlook: The Indian tractor industry might witness low single digit growth in FY24 owing to below normal monsoon levels forecast (source: Industry reports). CY24 is likely to report moderate growth in India and the UK. However, higher commodity prices, inflation, power surcharge and removal of subsidy on power by the UK government, may put pressures in its UK business. Indian industry will thus witness steady growth in exports.

Construction and material handling equipment

The Indian Construction Equipment (CE) industry recorded an excellent 26% YoY growth with sales crossing 1,00,000 units in FY23. The significant growth in FY23 was driven by all four sub-segments of CE industry: i) Road construction equipment, ii) material handling equipment, iii) earthmoving equipment and iv) tele-handler. Road construction equipment recorded a slight decline in growth of 3%. A total of 77,164 units of earthmoving equipment were sold in FY23, a 23% jump in sales as compared to 62,629 units sold in FY22. The material handling equipment segment recorded an impressive 47% growth, driven by 25% surge in sales volume of pick and carry cranes, accounting for more than 80% of total sales in this category. A significant increase in tele-handler sales was also witnessed with 713 units sold in FY23 compared to 342 units in FY22. Enhanced government focus on infrastructure development and steady revival of real estate industry were other factors that contributed to the growth of the industry and resulted in higher demand for construction equipment during the year (Source: ICEMA).

In construction equipment industry, a strong recovery is anticipated on the back of export potential and the government's continued thrust on infrastructure development through National Infrastructure Pipeline, Gati Shakti Masterplan, National Monetisation Plan, constitution of National Bank for Financing Infrastructure and Development. DTL continues to focus on increasing market share and improving efficiencies. Furthermore, the company will focus on developing new products to increase its wallet share.

Additionally, with given growth potential in construction equipment sector, **DTL is investing in the development of high pressure, heavy-duty cast iron pumps to cater to construction equipment sector.** These products are in various stages of development and testing, which will cater to global OEMs. Some of these products will undergo production phase in coming years, with supplies to global OEMs and aftermarket.

Peer benchmarking

We benchmark DTL against private players in aerospace & defence space in India. As the tables illustrate, DTL's revenue growth until FY26E is may be lower than most private players mainly as the impact of the recently won orders in aerospace is likely to be reflected adequately only post FY27E.

Exhibit 79: Revenue comparison with peers

Revenue (INR mn)	FY23	FY24E	FY25E	FY26E	CAGR (FY23-26E)
Dynamatics Technologies	13,158	14,841	16,755	18,571	12.2
Azad Engineering	2,517	3,400	4,658	6,011	33.7
Data Patterns	4,535	5,789	7,723	10,063	30.4
Astra Microwave	8,155	8,727	10,872	11,491	12.1
MTAR	5,738	6,714	9,792	13,991	34.6

Source: Isec Research, Bloomberg

Among peers, DTL enjoys the highest book/bill at 10.8x, hence, revenue visibility is significantly higher. We believe orderbook may be boosted further as there is significant scope to enhance the wallet share.

Exhibit 80: Book/bill ratio

(INR mn)	Orderbook	Revenue	Book/Bill (x)
Dynamatics Technologies	1,60,000	14,841	10.8
Azad Engineering	20,000	3,400	5.9
Data Patterns	9,628	5,789	1.7
Astra Microwave	18,130	8,727	2.1
MTAR	11,789	6,714	1.8

Source: Isec Research, Bloomberg

On EBITDA front as well, we expect DTL's CAGR through to FY26E to be lower compared to peers as the impact of the recently won (higher margin) orders in aerospace segment is likely to be reflected only post FY27E. Hence, we expect DTL's EBITDA CAGR (FY23-FY26E) at 15.8% compared to 32% on average for peers.

Exhibit 81: EBITDA comparison with peers

EBITDA (INR mn)	FY23	FY24E	FY25E	FY26E	CAGR (FY23-26E)
Dynamatics Technologies	1,813	1,664	2,416	2,814	15.8
Azad Engineering	723	1,089	1,635	2,118	43.1
Data Patterns*	1,718	2,283	3,142	4,225	35.0
Astra Microwave	1,476	1,837	2,684	2,823	24.1
MTAR*	1,540	1,488	2,477	3,630	33.1

Source: Isec Research, Bloomberg*

On PAT front, however, we expect DTL's CAGR through to FY26E to be 53% compared to an average of 40% for peers. This is due to lower interest payment from FY25E as debt is likely to be substantially lower with declining capex requirements, leading to higher cash generation (and consequently other income).

Exhibit 82: PAT comparison with peers

PAT (INR mn)	FY23	FY24E	FY25E	FY26E	CAGR (FY23-26E)
Dynamatics Technologies	428	1,396	1,180	1,545	53.4
Azad Engineering	85	423	915	1,181	140.7
Data Patterns*	1,240	1,801	2,376	3,170	36.7
Astra Microwave	848	1,262	1,798	1,896	30.8
MTAR*	1,034	871	1,509	2,294	30.4

Source: Isec Research, Bloomberg*

In near term, DTL's RoE and RoCE are likely to be lower than peers. However, we expect them to pick up once the recently won orders are executed and capex remains at a low level.

Exhibit 83: RoE comparison with peers

RoE (INR mn)	FY23	FY24E	FY25E	FY26E
Dynamatics Technologies	7.9	20.5	14.8	16.2
Azad Engineering	4.2	6.5	12.3	13.7
Data Patterns*	14.2	13.8	15.7	17.8
Astra Microwave	13.2	16.6	19.3	17.1
MTAR*	18.1	15.1	19.7	24.6

Source: I-Sec research, Bloomberg*

Exhibit 84: RoCE comparison with peers

RoCE (INR mn)	FY23	FY24E	FY25E	FY26E
Dynamatics Technologies	11.2	9.2	12.1	13.4
Azad Engineering	15.4	13.6	17.5	18.9
Data Patterns*	4.1	5.5	5.7	6.5
Astra Microwave	15.6	15.4	19.9	18.3
MTAR*	1.2	2.7	4.1	3.7

Source: I-Sec research, Bloomberg*

However, free cash accretion of DTL is likely to be higher than peers on an average. DTL has historically generated free cash every year since FY18 and we expect the trend to sustain. Over FY24-26E, we expect free cash generation to be 7.3% of the market cap.

Exhibit 85: FCF accretion compared to peers

FCF (INR mn)	FY23	FY24E	FY25E	FY26E	Cumulative (FY24-FY26E)	FCF (FY24-26E)/current market cap
Dynamatics Technologies	461	713	1,514	1,522	3,749	7.3
Azad Engineering	-958	-882	-473	-315	-1,670	-2.2
Data Patterns*	-568	312	861	1,145	2,318	1.7
Astra Microwave	939	1,205	969	1,819	3,992	7.6
MTAR*	-1,132	367	-313	135	189	0.4

Source: I-Sec research, Bloomberg

Valuation: We value DTL stock at INR 10,250/share

Despite lower near-term earnings growth potential, DTL offers significant advantages compared to peers :1) DTL's book/bill ratio at 10.8x is higher compared to peers giving significant visibility; 2) market leadership position with Airbus in FTBs and global (organised) tractor market; 3) lower leverage and working capital days; and 4) higher FCF generation potential in the near term.

Unlike peers, whose earnings are significantly dependent on domestic defence spending, pacing and distribution, DTL has significant chunk of revenue from non-defence overseas segment.

As seen in Exhibit 81, except Azad Engineering, target P/E of all peers in domestic defence space is 30x-40x. In case of DTL, we would ascribe a slight premium due to better orderbook position, working capital cycle and higher execution. We value DTL stock at 45x FY26E EPS, resulting in TP of INR 10,250/share. We initiate coverage on DTL with **BUY** rating.

Exhibit 86: Trading multiple of peers

P/E	1 Yr fwd	2 Yr fwd	Target P/E
Dynamatics Technologies	44.0	33.6	45.0
Azad Engineering	83.1	64.3	80.0
Datapatterns*	62.0	49.1	41.0
Astra Microwave	36.8	29.7	40.1
MTAR*	33.5	20.9	30.0

Source: I-Sec research, Bloomberg

Exhibit 87: Board and management profile

Name	Description	Other directorship
Dr. Udayant Malhoutra **CEO & MD**	Mr. Malhoutra is the CEO & Managing Director of the company and has been associated with the company for over three decades. He is credited with building and nurturing a world class management team and transforming the company into a knowledge-based organisation with global operations. He has served as the Chairman of the National Sector Skills Council for Strategic Manufacturing, and Chairman of the National Institute of Design, Amravathi. He has been conferred the degree of Doctor of Engineering & Technology (Honoris-Causa) from the University of Engineering and Management, Kolkata, in recognition of his outstanding contribution in the field of technology & innovation and his dedicated service to the nation.	• Greenearth Biotechnologies Ltd • Christine Hoden (India) Pvt Ltd • Primella Sanitary Products P. Ltd • Airoplat Pvt Ltd • JKM DAE RIM Automotive Ltd • Raghbir Agro Enterprises Pvt Ltd • San Engineering & Locomotive Company Ltd • Camfit Sanitary Napkin (India) Pvt Ltd • JKM Holdings Pvt Ltd • Conbar India Pvt Ltd • JKM Offshore (India) Pvt Ltd • Vita Pvt Ltd • Centrust Financial Pvt Ltd • Udyant Malhoutra & Company Pvt Ltd
Dr. Ajay Kumar **Independent Director**	Dr. Ajay Kumar is the former Defence Secretary of India an advisor for electronics development projects. He is an IAS from the 1985 batch. Dr. Ajay Kumar is an alumnus of IIT Kanpur and the University of Minnesota. Dr. Kumar currently holds the position of Distinguished visiting professor in Department of Management Sciences and the Department of Economic Sciences at the IIT, Kanpur.	• Cyiet DLM Ltd
Ms. Gaitri Isaar Kumar **Independent Director**	Ms. Gaitri Issar Kumar is a retired Indian Foreign Service (IFS) officer from the 1986 batch. After serving in several roles, including as the social secretary to the President of India in 2012, Ms. Kumar was appointed Ambassador to Belgium and the European Union on 14 June 2017. Her last posting was as the High Commissioner of India to the United Kingdom. As High Commissioner, Ms. Kumar prioritized deepening IndoUK ties and trade post-Brexit.	
Mr. Pradyumna Vyas **Independent Director**	Prof. Pradyumna Vyas was the former Director of National Institute of Design (NID). He is currently a Senior Advisor of Design Promotion and Innovation at Confederation of Indian Industry (CII). He acquired Masters in Industrial Design from the Indian Institute of Technology, Bombay and was awarded an 'Honorary Master of Arts' degree in 2010 from the University for Creative Arts in Farnham, United Kingdom. With more than 36 years of professional and teaching experience in different spheres of design, Prof. Vyas had been associated with NID for 30 years, first as a faculty member and later as the Director of the Institute (2009 - 2019).	• Carsil Ltd • JKM Erla Automoyive Ltd • Titan Company Ltd • Dynamatic Manufacturing Ltd
Mr. Pierre de Bausset **Independent Director**	Mr. Pierre de Bausset has over 37 years of experience in Europe, Asia and North America. He joined Airbus in 1989 and held various important management roles, including President and Managing Director of Airbus Group India and General Secretary of the Airbus. Prior to joining Airbus, he worked with Banque Indosuez, in Beijing and Paris.	
Mr. Dietmar Hahn **Non-Executive and Non-Independent Director**	Mr. Hahn has over two decades of experience in operations, sales and development, having worked in leadership positions at Eisenwerk Erla GmbH. He is the Executive Director, Eisenwerk Erla GmbH, Germany. He holds a diploma for Foundry Engineer from the University of Freiberg, Germany.	
Mr. James Tucker **Non-Executive and Non-Independent Director**	Mr. Tucker was formerly the Managing Director of Aerospace Dynamatic Limited UK, He has technical and operational experience in aeronautical manufacturing as well as customer liaison skills, having managed global aerospace majors like Boeing, Airbus, GKN Aerospace, G.E Aerospace & Leonardo. He is currently the Global COO, Dynamatic-Oldland Aerospace & Aerospace Dynamatic Limited UK.	
Mr. P S Ramesh **Executive Director-Group Technical Services and Human Resource**	Mr. P S Ramesh is the ED - Group Technical Services & HR. He has been with DTL since 1999 and has served in various positions of seniority. His career spans over three and a half decades, including a 12 years' service with Hindustan Aeronautics Limited (HAL), where he was associated with the manufacturing of Jaguar and TEJAS. He also served for 5 years as the Head of Quality and Technical Services in SMEA, the State Owned Malaysian Aircraft Industry. He holds a Master's degree in Aircraft Production Engineering from IIT Madras.	• JKM Research Farm Ltd • Harasfera Design Pvt Ltd • JKM automotive Ltd • JKM Erla Automoyive Ltd • Dynamatic Manufacturig Ltd
Mr. Chalapathi P **CFO**	Mr. Chalapathi P is a qualified CA and a post graduate in Commerce. He has been working with Dynamatic since 2009. Prior to joining Dynamatic, he was working with US-based manufacturing MNC M/s Interplex Electronics India Pvt. Ltd, Bangalore.	• Dynamatic Manufacturig Ltd • JKM Global Pte. Ltd.
Mr. Shivaram V **Head-Legal, Compliance and Company Secretary**	Mr. Shivaram is a qualified company secretary and a law graduate and holds over 15 years of experience in the company secretarial / legal matters. He also holds a post graduate diploma in business administration from Symbiosis University, and a PG diploma in foreign trade. He has expertise in handling M&As, equity issues and board management.	

Source: Company data, I-Sec research

Exhibit 88: Board has 4 Independent Directors out of 8 Directors

Key Committees	Chairman	Description
Audit Committee	Pierre de Bausset (Independent Director)	5 members with 4 Independent Director
Nomination & Remuneration Committee	Pradyumna Vyas (Independent Director)	3 members with 3 Independent Director
Stakeholders Relationship Committee	Pradyumna Vyas (Independent Director)	2 members with 1 Independent Director
CSR Committee	Gaitri Kumar (Independent Director)	3 members with 2 Independent Director
Finance Committee		4 members with 3 Independent Director
Risk Management Committee	Pierre de Bausset (Independent Director)	5 members with 4 Independent Director
Share Transfer Committee	Udyant Malhoutra (CEO & MD)	1 members with 0 Independent Director
1 Board Committees with 100% of Independent Directors		

Source: Company data

Related-party transactions

Exhibit 89: Name of related parties and description of relationship

Name of the related party	Description of relationship
JKM Holdings Private Limited	Entities over which key executive management personnel or relatives of such personnel are able to exercise significant influence and have transactions during the year.
Wavell Investments Private Limited	
Mr. Vivek Malani	Relative of Promoter Group
Ms. Ahilya Malhoutra	Daughter of Mr. Udayant Malhoutra (Promoter) (Joined with effective from Sept'21)

Source: Company data, I-Sec research

Exhibit 90: KMPs & Designation

KMPs	Designation
Udayant Malhoutra	Chief Executive Officer and Managing Director (CEO & MD)
P.S. Ramesh	Executive Director, Group Technical Services and Human Resource (ED)
Chalapathi P	Chief Financial Officer (CFO)
Shivaram V	Head Legal, Compliance & Company Secretary (CS)

Source: Company data, I-Sec research

Exhibit 91: List of subsidiaries

			Holding as at	
Name of the entity	Subsidiary / Step Subsidiary	Country of domicile	31 March 2023	31 March 2022
JKM Erla Automotive Limited ("JEAL")	Subsidiary	India	99.99%	99.99%
JKM Research Farm Limited ("JRFL")	Subsidiary	India	99.99%	99.99%
JKM Global Pte Limited ("JGPL")	Subsidiary	Singapore	100%	100%
Dynamatic Manufacturing Limited (formerlyknown as JKM Ferrotech Limited) ("DML")	Step Subsidiary	India	99.99%	99.99%
Dynamatic Limited ("DLUK")	Step Subsidiary	United Kingdom	100%	100%
Yew Tree Investments Limited ("YTIL")	Step Subsidiary	United Kingdom	100%	100%
Dynamatic US, LLC ("DUS")	Step Subsidiary	USA	100%	100%
JKM Erla Holdings GmbH ("JEHG")	Step Subsidiary	Germany	100%	100%
Eisenwerk Erla GmbH ("EEG")	Step Subsidiary	Germany	100%	100%
JKM Automotive Limited ("JAL")	Step Subsidiary	India	100%	100%

Source: Company data, I-Sec research

Exhibit 92: Related-party transactions

Related Party	Transaction	FY19	FY20	FY21	FY22	FY23
Dynamatic (UK)	Sale of manufactured goods	14.5	7.2	18.2	61.7	236.7
	Purchase of raw materials	144.1	127.1	73.3	30.3	-
	Management fees	27.0	30.2	1.1	0.7	-
	Corporate guarantee	-	(22.7)	13.5	30.4	27.2
	Rent	-	17.5	19.7	31.0	42.4
	Reimbursement of Expenditure	15.1	0.5	-	-	-
JKM Research Farm	Rent	4.8	4.8	4.8	4.8	4.8
Dynamatic – Manufacturing (formerly known as JKM Ferrotech)	Sale of raw materials	6.8	1.5	-	66.7	22.2
	Purchase of raw materials	256.6	162.8	25.0	-	4.8
	Interest Income	30.0	44.3	4.5	6.2	-
	Corporate guarantee	-	(86.8)	33.4	15.5	-
	Assets purchase agreement	-	-	-	-	(23.6)
	Reimbursement Capital & Revenue Expenditure	8.7	5.5	-	-	59.8
	Purchase of PP&E	5.4				
	Trade Advances	618.9				
JKM Holdings	Rent	0.4	0.4	0.4	0.4	0.4
Wavell Investments	Purchase of raw materials	34.9	74.0	45.5	55.7	46.2
Eisenwrek Erla	Equity Purchase	-	-	-	-	6.1
	Management fees	56.2	-	-	13.4	-
JKM Global	Investment	-	-	-	-	96.4
JKM Erla Auto	Equity Investment	-	40.0	44.0	-	-
Vivek Malani	Rent	-	-	-	2.7	2.2
Ahilya Malhuatra	Remuneration	-	-	-	0.4	1.2

Source: Company data, I-Sec research

Exhibit 93: Compensation of KMPs

Name (INR mn)	Designation	FY19	FY20	FY21	FY22	FY23
Udyant Malhoutra	CEO & MD	8.4	7.9	7.9	10.5	11.4
PS Ramesh	Executive Director	7.6	9.0	8.5	10.1	11.0
Arvind Mishra	Executive Director	7.6	9.0	8.4	10.1	11.0
Chalapathi	CFO	4.8	7.0	6.3	8.1	9.8
Shivaram	Head Legal & CS	0.3	3.1	3.0	4.0	4.8
Govid Mirchandani	Independent Director	1.0	0.9	1.0	0.9	1.6
Malavika Jayaram	Independent Director	0.3	0.1	0.4	0.2	0.5
Pradymna Vyas	Independent Director	-	0.4	0.7	0.6	0.1
Pierre de Bausset	Independent Director	0.1	0.5	0.7	0.5	1.0

Source: Annual report, I-Sec research

Exhibit 94: Subsidiary wise net profit contribution

	Consolidated net assets		Consolidated profit or loss		Consolidated OCI		Consolidated total Comprehensive income	
Name of the Subsidiary	Percentage	Amount	Percentage	Amount	Percentage	Amount	Percentage	Amount
Dynamatic Technologies Ltd (Standalone)	94%	51,033	69%	2,965	81%	-335	68%	2,630
Foreign Subsidiaries:								
Dynamatic Limited UK*	34%	18,156	52%	2,236	-	-	58%	2,236
Eisenwerk Erla GmbH #	34%	18,179	9%	388	-	-	10%	388
JKM Global Pte Limited, Singapore	10%	5,572	1%	39	-	-	1%	39
Indian Subsidiaries:								
JKM Erla Automotive Limited	24%	13,243	0%	-8	-	-	0%	-8
Dynamatic Manufacturing Limited (formerly known as JKM Ferrotech Ltd)	2%	828	-20%	-875	-	-	-23%	-875
JKM Research Farm Limited	5%	2,638	1%	35	-	-	1%	35
JKM Automotive Limited	-	-	-	-	-	-	-	-
Consolidated adjustments	-103%	-55,452	-12%	-501	19%	-81	-15%	-582
Total	**100%**	**54,197**	**100%**	**4,279**	**100%**	**-416**	**100%**	**3,863**

Source: Company data, I-Sec research * includes results of Yew Tree Investments Limited, UK and Dynamatic US LLC # includes results of JKM Erla Holdings GmbH, Germany

Exhibit 95: DTL Shareholding pattern

Category	FY21		FY22		FY23	
	No. of Shares	(%)	No. of Shares	(%)	No. of Shares	(%)
Promoters Holding						
JKM Holdings Pvt. Ltd.	9,12,538	14.38	11,12,538	17.54	11,12,538	16.38
Udayant Malhoutra	6,20,179	9.77	5,23,460	8.25	5,23,460	7.71
Udayant Malhoutra & Co. Pvt. Ltd.	6,42,011	10.12	6,42,011	10.12	6,42,011	9.45
Wavell Investments Pvt. Ltd.	4,48,281	7.06	95,000	1.50	-	-
JKM Offshore India Pvt. Ltd.	4,42,071	6.97	4,42,071	6.97	4,42,071	6.51
Greenearth Biotechnologies Ltd.	22,927	0.36	22,927	0.36	22,927	0.34
Barota Malhoutra	4,938	0.08	4,938	0.08	4,938	0.07
Vita Pvt. Ltd.	100	0.00	100	0.00	100	0.00
Christine Hoden (India) Pvt. Ltd.	100	0.00	100	0.00	95,100	1.40
Primella Sanitary Products Pvt. Ltd.	100	0.00	100	0.00	100	0.00
Total	**30,93,245**	48.75	**28,43,245**	44.84	**28,43,245**	41.87
Non-Promoters Holding						
Mutual Funds / UTI	5,43,228	8.56	4,34,536	6.85	4,13,691	6.09
Financial Institutions / Banks	4,173	0.07	383	0.01	383	0.01
Government	-	-	-	-	-	-
Venture Capital Funds	-	-	-	-	-	-
Insurance Companies	-	-	-	-	-	-
Foreign Institutional Investors	7,30,070	11.51	6,89,648	10.88	11,37,784	16.75
Total	**12,77,471**	20.13	**11,24,567**	17.73	**15,51,858**	22.85
Others						
Private Corporate Bodies	252300	3.98	3,34,295	5.27	2,85,395	4.20
Indian Public	1582885	24.95	17,37,391	27.40	15,45,461	22.76
Clearing Agents	20576	0.32	3,081	0.05	475	0.01
NBFC Registered with RBI	0	-	-	-	-	-
NRIs/OCBs	66354	1.05	69,217	1.09	72,066	1.06
Trust	3796	0.06	4,396	0.07	3,846	0.06
IEPF	48572	0.77	48,572	0.77	48,572	0.72
HUF			-	-	1,73,820	2.56
Alternative Investment Fund			1,76,679	2.79	2,66,705	3.93
Total	**19,74,483**	31.12	**23,73,631**	37.43	**23,96,340**	35.28
Grand Total	**63,45,199**	100.00	**63,41,443**	100.00	**67,91,443**	100.00

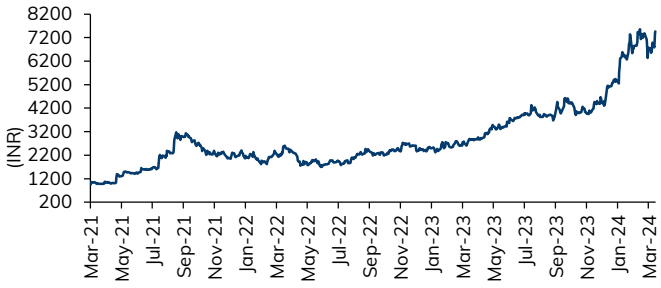
Source: I-Sec research, Company data

Exhibit 96: Shareholding pattern

%	Jun'23	Sep'23	Dec'23
Promoters	41.9	41.9	41.9
Institutional investors	27.1	27.7	28.1
MFs and other	5.8	5.7	5.7
Banks/ FIs	0.0	0.0	0.0
Insurance Cos.	4.7	5.3	5.7
FIIs	16.5	16.7	16.7
Others	31.1	30.4	30.0

Source: Bloomberg, I-Sec research

Exhibit 97: Price chart



Source: Bloomberg, I-Sec research

Annexure 1: Hydraulics product profile

Exhibit 98: Hydraulics products profile of DTL

Products	Use
Tractor Hydraulics	
Power Steering Valves	The valve allows fluid to flow to the cylinder which provides steering assistance
Pumps	Lifting heavy loads in excavators or jacks to being used in hydraulic splitters
Pressure & Flow Control	Control the rate of flow to hydraulic cylinders and motors & manage energy transfer rate
Hitch Control Valve	Helps keep operators safe and gives them precise control for optimized machine performance
Electronic Control Valve	Control the rotation degree of rotary actuators by releasing pressurized gas or liquid to specific places on the shaft
Electronic LH Assy	Ability to transfer a substantial amount of power through flexible hoses and small tubes
Power Steering Cylinder	Hydraulic ram that is attached to the steering linkage
Hydraulics - India	
Aluminum Body Pump	High resistance body for hydraulics for water source
Cast Iron Gear Pump	External gear motors are hydraulic machines converting hydraulic power into mechanical power
Cummins Lube Oil Pumps	Circulate oil through the engine to lubricate its moving parts and reduce friction.
Quadruple Pump	Lower's energy waste and lower energy consumption
Tractor Hitch Control Valves	Attaching and operating various Agricultural Implements and for operating tipping trailer
Rockshaft Assembly	Allows easy removal and replacement of the hydraulic lift cylinder
BTP Tractor Control Valves	Allows fluid flow into different paths from one or more sources
Lube Oil Pump Marine	Keeping operating machinery including engines, and constantly lubricated and to ensure the cooling of all working parts
Gear Motor	Used in applications that require high output torque and lower output shaft rotational speed
Internal Gear Pump	Pumping high viscosity fluids such as oil, paints, resins or foodstuffs.
Medium Pressure Pump	Transport hydraulic fluid from one location to another in order to generate hydraulic energy and pressure
Hydraulics - UK	
Aluminum Body Gear Pump	Used in water source to convert the high-speed motion of the electric motor into low-speed rotation for the propeller
Integrated Gear/Piston Pump	Pumping high viscosity fluids such as oil, paints, resins
Cast Iron Gear Pumps	Used in high pressure to convert the high-speed motion of the electric motor into low-speed rotation for the
Fan Drive Motor	Allows variable fan speed independent of the engine speed
Integrated Control Valve	Control the flow, pressure, level or even the direction of the fluid according to the need of the process
Tandem Gear Pump	Displace a fixed volume of fluid per revolution

Source: I-Sec research

Financial Summary

Exhibit 99: Profit & Loss

(INR mn, year ending March)

	FY23A	FY24E	FY25E	FY26E
Net Sales	**13,158**	**14,841**	**16,755**	**18,571**
Operating Expenses	5,035	5,629	6,145	6,648
EBITDA	**1,813**	**1,664**	**2,416**	**2,814**
EBITDA Margin (%)	13.8	11.2	14.4	15.2
Depreciation & Amortization	704	688	688	687
EBIT	1,108	976	1,728	2,127
Interest expenditure	654	618	435	375
Other Non-operating Income	98	1,042	280	308
Recurring PBT	**552**	**1,399**	**1,573**	**2,060**
Profit / (Loss) from Associates	**-**	**-**	**-**	**-**
Less: Taxes	124	180	393	515
PAT	428	1,219	1,180	1,545
Less: Minority Interest	-	-	-	-
Extraordinaries (Net)	-	-	-	-
Net Income (Reported)	**428**	**1,396**	**1,180**	**1,545**
Net Income (Adjusted)	**428**	**1,396**	**1,180**	**1,545**

Source Company data, I-Sec research

Exhibit 100: Balance sheet

(INR mn, year ending March)

	FY23A	FY24E	FY25E	FY26E
Total Current Assets	8,885	9,274	10,766	12,127
of which cash & cash eqv.	1,609	848	1,327	1,874
Total Current Liabilities & Provisions	3,522	4,076	4,512	4,480
Net Current Assets	**5,363**	**5,198**	**6,254**	**7,647**
Investments	3	3	3	3
Net Fixed Assets	5,481	5,393	5,005	4,618
ROU Assets	1,091	1,091	1,091	1,091
Capital Work-in-Progress	785	785	785	785
Total Intangible Assets	245	245	245	245
Other assets	198	198	198	198
Deferred Tax Assets	-	-	-	-
Total Assets	**13,166**	**12,914**	**13,581**	**14,588**
Liabilities				
Borrowings	**6,184**	**4,353**	**3,753**	**3,153**
Deferred Tax Liability	**103**	**103**	**103**	**103**
provisions	319	503	590	652
other Liabilities	1,140	1,140	1,140	1,140
Equity Share Capital	68	68	68	68
Reserves & Surplus	5,352	6,747	7,927	9,472
Total Net Worth	**5,420**	**6,815**	**7,995**	**9,539**
Minority Interest	-	-	-	-
Total Liabilities	**13,166**	**12,914**	**13,581**	**14,588**

Source Company data, I-Sec research

Exhibit 101: Quarterly trend

(INR mn, year ending March)

	Mar-23	Jun-23	Sep-23	Dec-23
Net Sales	3,679	3,625	3,509	3,455
% growth (YOY)	17.5	(1.5)	(3.2)	(1.5)
EBITDA	494	370	389	407
Margin %	13.4	10.2	11.1	11.8
Other Income	72	203	79	89
Extraordinaries	-	(176)	-	-
Adjusted Net Profit	175	414	121	112

Source Company data, I-Sec research

Exhibit 102: Cashflow statement

(INR mn, year ending March)

	FY23A	FY24E	FY25E	FY26E
Operating Cashflow	**1,310**	**1,313**	**1,814**	**1,822**
Working Capital Changes	(592)	(412)	(489)	(785)
Capital Commitments	(849)	(600)	(300)	(300)
Free Cashflow	**461**	**713**	**1,514**	**1,522**
Other investing cashflow	**20**	**976**	**-**	**-**
Cashflow from Investing Activities	(830)	376	(300)	(300)
Issue of Share Capital	1,129	-	-	-
Interest Cost	(545)	(618)	(435)	(375)
Inc (Dec) in Borrowings	624	(1,831)	(600)	(600)
Dividend paid	(19)	-	-	-
Others	-	-	-	-
Cash flow from Financing Activities	723	(2,450)	(1,035)	(975)
Chg. in Cash & Bank balance	**1,203**	**(760)**	**479**	**547**
Closing cash & balance	1,378	848	1,327	1,874

Source Company data, I-Sec research

Exhibit 103: Key ratios

(Year ending March)

	FY23A	FY24E	FY25E	FY26E
Per Share Data (INR)				
Reported EPS	67.3	179.6	173.7	227.5
Adjusted EPS (Diluted)	67.3	219.6	185.6	243.1
Cash EPS	178.1	306.9	275.1	328.6
Dividend per share (DPS)	-	-	-	-
Book Value per share (BV)	852.8	1,003.7	1,177.4	1,404.9
Dividend Payout (%)	-	-	-	-
Growth (%)				
Net Sales	5.0	12.8	12.9	10.8
EBITDA	7.1	(8.2)	45.2	16.4
EPS (INR)	33.2	166.7	(3.3)	31.0
Valuation Ratios (x)				
P/E	110.7	41.5	42.9	32.8
P/CEPS	41.9	24.3	27.1	22.7
P/BV	8.7	7.4	6.3	5.3
EV / EBITDA	28.7	30.6	20.6	17.3
Dividend Yield (%)	-	-	-	-
Operating Ratios				
Gross Profit Margins (%)	52.0	50.9	48.9	49.1
EBITDA Margins (%)	13.8	11.2	14.4	15.2
Effective Tax Rate (%)	22.5	12.9	25.0	25.0
Net Profit Margins (%)	3.3	8.2	7.0	8.3
Net Debt / Equity (x)	0.8	0.5	0.3	0.1
Net Debt / EBITDA (x)	2.5	2.1	1.0	0.5
Fixed Asset Turnover (x)	1.8	2.0	2.1	2.2
Inventory Turnover Days	89	95	101	100
Receivables Days	77	84	86	85
Payables Days	68	79	83	73
Profitability Ratios				
RoCE (%)	8.5	8.0	11.3	13.4
RoE (%)	9.9	26.1	17.5	19.0
RoIC (%)	9.3	8.7	12.7	15.2

Source Company data, I-Sec research

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